

THE AMERICAN FARMER

ESTABLISHED 1819

NINTH SERIES.

BALTIMORE, MD., AUGUST 15, 1882.

VOL. I.—No. 16.

Ensilage.

A paper read before the Maryland Improved Live-Stock Breeders' Association, August 9th, 1882.

By CHARLES K. HARRISON.

Being requested to read a paper upon the preparation and economic uses of ensilage, I take great pleasure in appearing before you to urge its claims, as I am confident that it will be looked upon before long as one of the most important operations connected with farming.

I would first call your attention as evidence of the interest this question has excited, to the Ensilage Congress held in New York on the 25th of January last, when a number of farmers and others from all parts of the country met for the purpose of interchanging views of experience, extending over some years, on the question of ensilage. Letters from some thirty persons who were unable to attend, were read, then published together with the proceedings, which occupied some two days. The Congress then adjourned for one year, after passing the following resolution:

"Resolved, That it has become an established fact by six years' successful use in this country, and by the concurrent testimony of many intelligent farmers, that the ensilage system is of great advantage to the farming interest, and to all mankind."

Thirteen or fourteen gentlemen brought samples of ensilage, and several samples of milk and butter produced from ensilage were also exhibited, and much praised.

In spite, gentlemen, of the rapidity with which this system has spread through the North, South, East and West, many laying claim to scientific accuracy deny that there can be much economy in feeding a material which is so largely composed of water, and of which, after the water is eliminated, they declare that the residue proves less efficient than hay.

I will quote on this subject, the remarks of Dr. Lambert, made during an address before the Congress I have just alluded to:

"It has been noticed, he says, that in the laboratory of plants, animals and the human body, there is a refined chemistry, which the most skilled scientist cannot imitate, nor divine the method of. The green grass under his analysis, contains the same elements, not counting water, and in the same proportions as dried hay, even after it has been rained upon by several storms, until, in fact, it is worth very little for feeding any animal. When milk has lost its water by dessication, and pure water is returned to it in natural proportions, perfect milk is not again produced, its true milk qualities are not restored, yet it would appear from the scientific analyses of condensed milk, that water only was wanting.

The test therefore of ensilage as a food, was only to be found by having it eaten.

The universal relish that all kinds of animals manifest for it, was taken by most persons as a decision by instinct that it was wholesome; some feared the fermentation, as it has been improperly termed, of the ensilage, but science soon settled the fact that there is no genuine fermentation in the silo—that is, no alcoholic, acetic, or putrefactive fermentation. Experiments have shown that no alcohol, at least that is collectable, is produced in a silo."

The benefits of ensilage are now so generally appreciated, that the construction of silos, and the proper crops to ensilage, are really the topics that should arrest our attention.

In regard to the first, a few very simple directions are all that is necessary. Select if possible a situation in a hill side, where you can drive into the bottom of your silo, and if this be not practicable, I should advise the silo being built of masonry, and wholly above ground.

The materials to be used in constructing silos can be such as are least expensive in the vicinity where they are to be erected; provided, that you secure yourself against both seepage and surface water, either wood or masonry would answer. Silos of masonry, either stone, brick or concrete, are to be recommended in spite of their first cost, in consequence of their great durability; cement, with stone or brick, is only necessary where entry of water is to be apprehended.

The best dimensions for a silo, I believe, are that it should be not less than 20 feet wide, or a greater length than a 100 feet, on account of the labor of spreading the material; should it be found necessary to place the cutting box at one end of the silo, then the length should not exceed 50 feet. As regards the depth, it must be borne in mind that the greater the depth the more economically it can be weighted, as it costs no more to weight a silo 35 feet deep than one 3 feet deep. The sides of the silo should be vertical, and a loose cover of boards and 1,000 lbs. of earth or stone to the square yard of surface should be placed over the ensilage, as soon as the silo is filled.

Tramping with horses or mules, during the process of filling, is not necessary to its proper preservation, but is to be strongly advised as enabling ensilage to be pressed into a given space.

A roof should be placed over your pit to protect the contents from the weather.

The next important steps are the proper crops to ensilage, and the proper and economical handling of such crops when ready for cutting. It is my belief that the number of tons of corn fodder you can raise to the acre, and its resisting bad seasons so much better than any other crop in Maryland, make it, *par excellence*, the crop to ensilage. I do not give this as my opinion, without some experience as to the merits of other crops, pushed into notice, for this purpose. I have tried Indian durrh, German millet, Pearl millet and Sorghum. Clover I have never tried, but am willing to admit that a ton of clover ensilage is superior to a ton of maize ensilage, but its limited yield as compared with corn, and the time at which it is ready for the silo are, with a practical man, grave objections to its extended use on some farms.

Plant your corn at the rate of 1½ bushels to the acre, in drills three feet apart, in heavily manured land. I think it of advantage, as improving the feeding qualities of ensilage, if a peck to the acre of Southwest Virginia corn field beans or peas be drilled in with the corn. A word here as to the best

kind of corn for ensilage: the best two kinds that I am acquainted with are Lindsey's corn, sold in Norfolk, and Blunt's white prolific. I believe the kind of corn has everything to do with heavy yields; this is my experience with these kinds tried alongside our Maryland corn.

When the corn is in tassel, and just as the ear is coming into milk, when the stalk is full of sugar, is the proper time to cut, care being taken to bring it to the pit as green and fresh as possible. You should be provided with a strong cutting box, and one that has a carrier, to take your corn fodder into the knives steadily and regularly; the carrier should not be less than 10 feet long, and have a gum belt travelling in its bottom. Do not be induced to purchase a cutting box that is not furnished with this most necessary improvement, and if you have to elevate your cut fodder, you will need an elevator in addition to your carrier to carry the material over your silo wall.

You will find numberless opinions as to the best length to cut your crops, but as the fodder will keep, cut at all lengths, you should be guided by circumstances. Cut as short as is consistent with keeping your teams constantly employed. When my wagons bring it to the cutting box faster than I can cut it, I increase the length of cut, until I can keep my wagons employed. Bear in mind, however, that short cutting has its advantages; it is easier to feed, takes the meal better, and packs closer in the pit.

One of the heaviest labors connected with ensilage is the unloading the fodder, and placing it upon the carrier; to lighten this labor as much as possible, fasten two ends of a rope to the rear jack of your hay frame, and lay the rope along the bottom of the hay bed; load the fodder upon the rope, laying it across the hay bed with the butts all one way, then pass the rope over the top of the load, and when you reach the pit, hook the rope over a stout post, set deeply in the ground, and your fodder will be deposited on the ground by the team moving forward. Those who have weak sills to their wagons would do well to strengthen them over the hind axle, and behind it, before attempting this mode of unloading.

The labor of cutting the crop must next be considered; it takes a good many hands, but I am glad to say, here also, there is a prospect of help for the farmer. One of the harvesting companies, the Champion, will experiment on my crop of corn this season, with a view to arranging a machine for this work, and I see by a circular of the New York Plow Company, that they are prepared to furnish a machine to cut corn fodder, dropping it in bunches, also a dropper attachable to all mowers, for the same purpose.

One of the most important elements to make ensilage a success, I have not yet touched upon, viz, the cost. By a careful estimate of the cost of cultivating 40 acres, and securing 25 tons to the acre of ensilage, and in this are included plowing, harrowing, seed, harvesting, fuel, engine hire and three hundred and sixty dollars for fertilizer, I

find it to cost one dollar per ton; and if 50 tons can be raised in place of 25, and you will hear of many who claim it can be done, though I myself am a little skeptical about it, the cost in this case would be reduced to 65 cents a ton. In estimating I have charged the cost of teams, and monthly labor, an expense a farmer is under whether he packs a ton of ensilage or not.

In conclusion it will not be amiss to again quote from Dr. Lambert's address, on this subject, and especially why alcohol is not to be looked for in the silo, and why ensilage is easily digested.

"A few technical terms must be used, but the necessity will excuse them.

Fermentation in its general sense means a commotion. Hence any process attended by commotion may be named fermentation. But, the use of this word is now by scientific persons, limited in meaning by various defining words; alcoholic fermentation, is a simple specific form, to which the microscopic yeast plant and sugar are essential. The sugar exists in the ensilaged plants, but where are the yeast plants?

If, by chance, a few should exist and be planted with the ensilage in the silo, they could not be readily distributed through the mass, whereas the process which is erroneously called fermenting, exists all through the great mass of ensilage in a very short time.

The yeast plant can be disseminated rapidly through the liquid contents of the brewer's vat; it is with diligent industry slowly mixed through even a small portion of dough; how then can it be spread with rapidity through the trodden compact mass of ensilage?

The sugar is within the cells of the ensilage in its juices, difficult of access, but the yeast plant must find its sugar near at hand; then only can the yeast plant feed upon the sugar, taking from the elements of which the sugar is formed those which the plant needs for its growth and multiplication, and casting off as excrement the carbonic acid gas, which produces commotion, and alcohol in the form of a liquid, which is, so to speak, the urine of the yeast plant.

Neither existed as such in the sugar, neither existed as such in the grain, the fruit or the plant, which furnished the sugar, neither exist in the bread, in the dough of which both were produced by the yeast plant, since both were driven out of the baking bread by the heat to which it was exposed. Some persons have been made anxious by the wholly imaginative, and hence culpable suggestion, that the process that takes place in a silo is in part an alcoholic fermentation, producing alcohol, and terminating in acetic fermentation, saturating the ensilage with unwholesome vinegar or acetic acid.

The acid produced in the silo is not vinegar or acetic acid, since this unwholesome acid is the result only of alcoholic transformation in the presence of an abundance of oxygen.

That the acid is not acetic or vinegar, any one can test. Shoemakers make their blacking by putting nails or other small pieces of iron into vinegar or acetic acid, producing a rusty, dark liquid; hence, if a portion of ensilage be moistened with water and then pressed, and some small pieces of clean iron are placed in the liquid obtained, the result will soon show that acetic acid is not there.

This absence also negatively proves that alcohol has not been there, since in the presence of vegetable matter it, to a certain extent, readily undergoes the acetic fermentation.

The circumstances usual in a silo are as favorable to the forming of lactic acid as they are unfavorable to the forming of alcohol."

I have fed ensilage with great success, to sheep, calves and neat cattle, and the excellent health and fine appearance animals so fed exhibited, was very apparent to all.

It will not be amiss to add a few words especially applicable to the members of this association.

You are all engaged or interested in the breeding of improved live-stock, and naturally anxious that your animals should present at all seasons of the year, an attractive appearance. This is just where ensilage will aid you most. Its merits in a breeding herd are briefly these: When cattle have to make the change from green food to dry provender, causing a shrinkage in milk and a falling off in appearance, those fed on ensilage preserve the flow of milk, the mellow hide, the bright eye, and moist skin of grass-fed cattle, and charm the eye of not only the judge of animals, but likewise the inexperienced purchaser; the change that takes place in spring, from dry provender to green food, is also avoided, and the animals correspondingly benefited.

In the case of very young calves its digestibility serves an admirable purpose, and enables you to improve and keep them in fine health and growing condition. If ensilage be of special benefit to any class of farmers, it is to feeders and breeders especially advantageous, and apart from any pecuniary benefit to be derived from its use, will if once given a fair trial never be dispensed with.

The Wheat Crop.

BY THE DEER CREEK FARMERS' CLUB.

The Deer Creek Farmers' Club met at the residence of Mr. Thomas Lochary, on July 29th, and discussed the wheat crop.

Judge Watters and Jas. Lee, of the committee previously appointed to examine the condition of the farm and buildings, reported through Judge Watters, who said that the rain had interfered with their examination. They had found, however, that since the last meeting of the club at this place Mr. Lochary has built a snug little barn and has it well filled. Everything they saw was in a farmer-like condition and there were marks of improvement all around. The President thought Mr. Lochary's place looks remarkably well. The fields are well covered with grass and he has a nice field of corn.

A discussion then took place on the wheat crop, a report of which we take from the *Argis*.

Mr. Lochary said he had not proposed the question to impart information to the club, but for the purpose of gaining information. A great deal more money is spent for fertilizers than for labor on the wheat crop, and it is therefore an important question what is the best kind of fertilizers to use, bone, phosphate or guano. Last year he applied 400 lbs. of Holloway's Excelsior to the acre, and on another part of the same field he put bone dust. Where the Excelsior was used the wheat looked well until last May, when it lodged, and he believed the other part of the field would turn out best. He thought bone dust had a tendency to stiffen the straw. If he had put on less Excelsior the wheat would probably have been better. He had tried straw on wheat in a field that was likely to wash, and found that while it did not benefit the wheat it stopped the wash and the clover took better. If he had a steep hill-side he should try it again. He sowed bearded wheat, but Fultz would have stood better. His average yield for the last five years has been 15 bushels to the acre. This year it is more. Sows 2 bushels of seed to the acre, and timothy after the drill. The latter takes pretty well that way, but a light covering would be better. Aims to sow the last of September or 1st of October. He tried plowing corn ground for wheat, but thinks it best to cultivate it.

R. J. Rogers said there was no fixed principle for growing wheat except to prepare the ground well and fertilize well. He advised the use of from 150 to 200 lbs. per acre of good, reliable phosphate with bone dust. The preparation of the ground has much to do with raising a crop. Too much labor cannot be expended before sowing, if rightly done. His experience is that the results of plowing and of cultivating stalk ground for wheat are about equal. A stiff, heavy soil had better be plowed. He always drills his wheat. He thought Fultz wheat had nearly run out and a change is needed. He uses bone principally. Last year he used Davison's High-Grade phosphate with the bone and found it did well. One of his neighbors raised a fine crop with Davison's Grain Generator, which is chiefly South Carolina Rock, applying 400 lbs. to the acre. He plows stubble for wheat, and has been getting from 25 to 30 bushels to the acre.

B. Silver, Jr., said the ground should be well pulverized and worked deeply. He generally seeds corn ground; works it with corn workers; harrows, drills and rolls; the latter sometimes after and sometimes before sowing the wheat. He likes to roll corn ground in the spring also, as it makes better cutting. Has seen phosphate used with good effect. He believed that the average yield of Fultz wheat is better than that of bearded wheat. His father, some years ago, raised 40 bushels of Fultz to the acre.

In reply to questions Judge Watters said that two years ago he raised 40 bushels of Fultz wheat per acre over a twenty-five acre field, and Mr. James Lee the same year raised 42 bushels to the acre.

John Moores said he had begun to think, up to last year, that he knew how to raise wheat, but he was mistaken. He believed the failure came from plowing his wheat stubble when too dry. He applied 200 lbs. of bone and 200 lbs. of phosphate and raised only 20 bushels per acre. He did not regard 40 bushels as a full yield. Our land ought to produce 60 bushels. In raising wheat much depends on the cultivation of the ground. The land should be well plowed and well tilled afterwards, the work extending over some weeks, harrowing it at intervals. Early plowing is best. He had found wheat better on oat stubble and the Red Mediterranean better than Fultz. He had mixed the two for several years, with advantage. He approved of using a little phosphate with bone, and 300 to 300 lbs. of salt to the acre is a good thing. The salt can be drilled in with the phosphate. It is also important to have good, mature seed. We should screen our seed wheat and not sow any small grains. He begins sowing from the 18th to the 20th of September, and sows 1½ bushels to the acre. Endeavors not to sow it very deep. He prefers to drill timothy in front of the teeth rather than behind. Timothy cannot be sown too thinly. One bushel to 7 acres is abundant. He harvests before the wheat gets thoroughly ripe. Had never seen wheat cut too green, except when wet weather came on after cutting. The advantage of cutting green is that it occupies less space in the shock, in the wagon and in the barn, than when allowed to stand until perfectly ripe and dry.

S. B. Silver said he had been growing very little wheat lately. This year he had in only ten acres. It was sowed on pea sod, which had been worked afterwards. The crop was a splendid one. It is of the first importance to get the ground in good order. It should be well plowed and worked below the surface. Mr. Silver sows from the 15th to the 20th of September, and 1½ bushels to the acre. Last year he used Star Bone. The drill missed in places and the difference could be seen in favor of the phosphate. He was in favor of sowing wheat thick and pasturing it short with sheep in the spring. He has had evidence of the value of that

plan several times. They should not be allowed to go on the wheat when the ground is soft, or after the middle of March. Cattle would be an injury, on account of their large foot-prints. Harvests when medium ripe.

Mr. Slade said that last year he plowed 11 acres, part of it when very dry. Where he plowed first the yield was nearly double that plowed dry. His stalk ground wheat, 16 acres, was better than that on stubble ground. He applied bone dust alone and sowed Red Mediterranean wheat.

Wm. D. Lee said that all the heaviest crops of wheat he had ever seen in his neighborhood were raised on clover sod. He mentioned large crops raised by James Lee and George R. Glasgow, both of whom plowed early. If he were to make a special effort to raise a large crop he would select clover sod, plow early, apply bone and phosphate equally and drill 1½ bushels to the acre from 15th to 20th of September. It is important to have the ground thoroughly pulverized both for the wheat and to ensure the grass seed taking. He believed the Fultz wheat had nearly run out.

Thomas A. Hays said he would not sow one kind of wheat alone. This year he raised one-half Keyes' Prolific and the other Fultz. Uses 200 lbs. of bone dust and 200 lbs. of phosphate per acre, mixed and drilled in. He regarded the Fultz as most productive, but preferred the Prolific for bread. Mr. Hays sows 1½ bushels to the acre with the drill, from the 15th to the 30th of September. Prefers a clover sod, plowed as early as possible, and the ground in as good order as you can get it. When he intends to sow clover on stalk ground, he plows it, seeds to wheat, rolls it and lets it remain until spring. Last spring he sowed 300 lbs. of salt per acre on the poorest place in his wheat fields. There he had the best straw and finest heads of wheat. The land was well harrowed in the spring, after the clover was sowed. Sowed timothy last fall. If timothy seed could be covered lightly would prefer it. In sowing wheat on stalk ground he rolls it after cultivating it.

Judge Watters said his rule was to depend upon raw bone, but did not think much benefit is derived from bone dust the first year. In sowing wheat on stubble ground it is better to put something on for that special crop, say 200 lbs. of dissolved bone and 100 lbs. of Peruvian Guano mixed. It is better than phosphate. There is not so much risk in buying dissolved bone as in buying phosphate, for the reason that there is not the same temptation for the dishonest manufacturer to adulterate the bone as the phosphate. Peruvian Guano ripens up the wheat better than anything else. For the past two years he has plowed stalk ground. Before that he cultivated it. Could see no difference in the wheat, and plowing prepares the ground better for grass. He plows early, whether stubble or sod, so as to give the ground a chance to settle before seeding. It is important to harrow and roll the ground well. The ground should be packed underneath rather than on top and the harrow does that better than the roller. He rolls wheat ground in the spring when sowing clover. The last two years he applied 300 lbs. of salt to the acre, with good results, particularly in the filling of the wheat. The salt was sowed about the 1st of May. Rolls the wheat ground as soon after freezing as it will bear stock, and before the wheat begins to grow much. Rolling makes the clover come up better. He harrowed his wheat one spring and did not like it, but it might be of advantage if harrowed with a harrow adapted to the purpose.

Geo. E. Silver was not much of an advocate of the wheat crop, and were it not for getting the ground back in grass would sow very little wheat. This year his wheat crop is the best he ever had. He attributed it to

the season mostly, but partly to the condition of the land. It was plowed early for peas; allowed to lie, then harrowed again and put in good condition. It had been well manured with phosphate for the peas, and 400 lbs. of Star Bone per acre for the wheat. He believes in thorough tillage and early plowing. Likes to sow about the middle of September to the 1st of October, six pecks to the acre, with the drill. Also drills in the bone and phosphate. Prefers phosphate to bone because the latter is not active enough. When his wheat is harvested he threshes early and sells early. He thought that the better plan.

R. H. Archer's plan has been to seed corn ground in wheat and plow the stubble for wheat again. In grazing cattle that is the quickest way to get the land back in grass again. Believes in early plowing, which can be done when stubble is seeded. Sows bone broadcast as soon as the ground is plowed; harrows once. Lets the ground lie until the 14th or 15th of September. One hundred lbs. of Peruvian Guano and the same quantity bone, mixed together is a good fertilizer to drill in with the wheat. That with 400 or 500 lbs. of bone put on in August will bring a wheat crop. He thought plowing corn stubble did not leave the ground in good condition for grass. He cuts his corn six inches from the ground. In the spring he runs a roller over the field the same way he intends to run the reaper, and runs the rake the same way. Then he gets no stalks in his rakings. Sowing grass seed with the first crop of wheat encourages the growth of briars. By plowing twice and seeding with wheat two years in succession the land is put in better order for grass.

Mr. Lochary thought the corn crop more profitable than wheat, and by putting the same field in wheat two years in succession, in the course of years many corn crops would be lost. He thought it would pay better to seed grass with the first crop of wheat.

Mr. S. M. Lee said the best variety of wheat to sow is the rough red wheat. Plow clover sod as early as possible, say the last week in June or 1st of July. Likes to be done by the 15th of July. The largest crops of wheat he had ever seen, sometimes 40 bushels, were on clover fallow, without any fertilizer. He recommended as a good fertilizer for wheat, one-third guano or phosphate and two-thirds raw-bone; if using raw bone alone would apply it in July or the first week in August, on the surface. If there was not rain enough to settle the ground would harrow. Prefers to sow from the 15th to 20th of September. Generally tries to have a grass crop after wheat, and would never sow wheat twice in succession on the same field unless compelled to. Plowing corn ground or cultivating will depend on the soil. As a general thing, cultivating is cheapest and best.

Mr. Allen agreed with Mr. Lee. He approved of the plan of pasturing in winter, after heavy manuring. He believed with Mr. Moores that 60 bushels of wheat per acre can be raised if we could get it to stand up. Plowing clover sod, high fertilization and pasturing might make it.

Mr. James Lee said his plan of raising wheat was to plow early, apply fertilizers as early as possible, generally about the 1st of August. Does not use barn yard manure on wheat, as it puts it down and does not make as good yield as commercial fertilizers.

Mr. Munnikhuyzen, the President, agreed very much with Mr. Archer. It is his practice to plow stalk ground the second time, and the second crop of wheat is the best, besides leaving the land in better condition.

Mr. Jas. Lee remarked that the best crops he ever raised—40 and 43 bushels—were in succession on the same field. The first year clover was turned under.

Judge Watters said it seemed to be generally understood that bone to have any effect should be sowed early. He had sowed it on grass, letting it lie a year before plowing, and his experience was that it is the best way.

Adjourned to meet at Mr. Thos. A. Hays', August 26th.

Intense Culture.

In order that farming in all our Eastern and Atlantic States may be made to compete with the more virgin soils and cheaper lands of other sections, our culture must be intensified, made *thorough*. If we would expect our land to produce a large crop of any kind or variety we should omit no essential in its previous preparation, or in any practicable treatment of the crop in any stage of growth. If by a certain course of culture ten bushels of wheat per acre will pay expenses of use of land and other items of culture, etc., then any addition to the product will go as an offset to extra culture. Now if by adding to the expense of culture, say \$10, we are enabled to grow twenty bushels of wheat per acre, any one with half an eye can see that more profit is made on the crop; and not only that, but there is also an increased value to the land for several succeeding crops. Here we not only get immediate remuneration, but large interest is also received for some succeeding years. In order that our culture may be improved, we must study our soil to find out its needs and requirements; and then we should inquire, am I able, or competent, to supply or fulfill the requirements? In the culture of land we have a great variety of circumstances, etc., to consider and provide for, some of which we may entirely control, others partially, while some beyond may be in a degree mitigated or prevented by judicious thought and preparation beforehand. The profit of arable or other crops from our land is largely dependent upon the employment we put them to after their due production. We should see to it that while we produce crops which are most profitable in money—that is, present profit, that in a series of years we do not lose thereby, but that each succeeding crop makes us and the land better prepared to go on improving in the near future. One of the first steps in improving culture, for any special crop, is in the preparation of the land for that particular crop, for different crops require preparation especially adapted to that crop, and for each and every variety it should be the most thorough of its kind. Time and space fail me to enumerate the various elementary circumstances which enter into consideration, and here I must leave the reader to draw inferences to suit his particular circumstances, while he adopts a more thorough system of culture, keeps up to and improves on the age.

W. H. WHITE.

Worcester County, Mass.

Speculating in Grain.

Messrs. Editors American Farmer:

Not many years ago quotations of future deliveries for grain were unknown, and a millionaire was a rare production of our free institutions; now, the latter are counted by the scores in our great financial circles, and private fortunes are counted by tens of millions. It is said that fifteen of these money kings can corner and control any of our agricultural productions, hence the whole market value of the productions of this great country is to-day at the mercy of centralized wealth; their value is forced up or down at their pleasure, regardless of demand and supply, or the cost of production, when, if let alone, they would be rated by the labor required to produce them, which would insure such equable adjustment between capital and labor as would harmonize disensions; but when disturbed by gambling influences such conflicts as are now pending may be expected. On the approach of harvest, if prospects are fair, the "gang" howl "seller," September, October, November, etc., way down below any reasonable figure, and keep pounding it down until the bulk of the crop is delivered, when the legitimate dealers wake up some fine morning and find that speculators have stepped in and bought double

the crop that has been grown, on hand, or can be delivered; and this is a legitimate business by which the farmer is to be made rich, the consumer eat cheap bread, and the milling business with thousands of dollars invested, giving employment to hundreds of hands, must sit idly by without a murmur, and list to the oft repeated phrase, "What are you going to do about it?" Necessity for action will become so great that some way out of the dilemma will be suggested, before many years. Some persons have so construed the definition of the word "speculator" as to be applicable to any farmer who may not be willing to accept the price which has been forced (by speculators) below the cost of production, but I cannot think it is applicable to any honest farmer who stores away the fruits of his labor in hopes of receiving a just reward. He is certainly not a speculator in the same sense that the courts defined, pending the trials in Illinois. The wheat "speculators" to-day should be classed as gamblers, and be punished as such. It is just as dishonorable to gamble in grain as in anything else, and it is only because they are men of wealth that they are held in any higher esteem than is the lowest faro player or gambler to-day.

WM. E. MANAKER.

Montgomery County, Md.

Agriculture Abroad.

From our Paris Correspondent.

CATTLE IN FRANCE.—France may be said to have no herd book, save for Durhams, and which only dates from 1871, yet she has several excellent native breeds of cattle whose purity merits a special register; her famous breed of Percheron horses, has no hereditary archives of which to boast; the United States, which commences to buy up all these valuable horses, keeps a record of the race. The Durham breed of cattle has many opponents in France, and a study of the statistics respecting the animals of this race, born in or imported into France, reveals a few interesting facts.

The records of the herd book in question are official, and comprise the period 1871 to 1879; during the former year, there were 530 Durhams born in France, of which total, 238 were males, and 292 females. In 1875, the births were 659, comprising 323 males, and 336 females; in 1879, the births were 560, and consisted of 263 males, and 297 females. A glance at these figures, exhibits the great disproportion between the sexes; the females uniformly predominate over the males. This peculiarity besides would appear to be special to the short-horns. Normally, the sexes maintain almost an equilibrium, as over a wide range of births, the males predominate slightly, in the ratio of 106, to 100 females; but as shown by the foregoing totals, the ratios are: 81½, 96, 88½ males, to 100 females, respectively. This is the result of the law of heredity, by which breeders direct their efforts to weaken the temperament of the bull in order to produce what is known as fineness.

The figures further indicate, that while in 1879, the total registered Durhams was 530, and in 1875, 659, the number in 1879 fell to 560. This diminution is to be attributed simply to a falling off in the number of breeders, and a fact very curious, that while the breeders of Durhams belonging to the upper or aristocratic classes, remained invariable, those who may be ranked as working agriculturists, have relinquished the breeding of Durhams, as unremunerative, while the wealthier classes continue their rearing, apparently as a luxury.

IRRIGATION.—Very great attention is given at present in France to irrigation. Soil is female, water male, says an Arabian proverb. To be able to irrigate land appropriately, is to bring fecundity, where without such, the soil would remain sterile, despite all labor

and manuring. But the agriculturists must be instructed how to employ, and economically, the water within their reach, from springs, rains, and streams. The department of the Var, is one of the driest in Southern France, and one which has most suffered in its vineyards from the phylloxera. Proprietors have employed steam engines to pump water from rivers and inundate the vineyards in autumn, thereby drowning the phylloxera to a large extent. The cost of plant, &c, amounted to 2,400f. per acre in the year 1875, when the flooding began to tell; in 1881, vineyards which six years previously represented but a dead loss, yielded a clear profit in nine of 1,000 per acre, or 25 per cent. The expenses would be very much less, where the water is furnished by canal, or tapped from springs. Small proprietors frequently unite to secure a water supply, for if submersion in autumn be not a cure for the phylloxera, it certainly minimizes its ravages.

The role of water in vegetation is most advantageously ensured, when the irrigations are intermittent, instead of non-continued, between April and September; the sheet of water arriving on the soil after an interruption, forces the stratum of air, which has replaced the first watering, to descend into the soil, renewing there the atmospheric oxygen around the roots of the plants. Two or three irrigations per week suffice. The same number of irrigations is not required for every kind of culture, as science has demonstrated there is a connection between the weight of water which ought to pass by evaporation of the leaves, and the gross weight of that yield. That connection represents 60 times the yield in the green state; in other words, the less succulent the produce the less the quantity of water required.

Live Stock.

Maryland Improved Live-Stock Breeders' Association

Held its quarterly meeting on the 9th instant, the attendance not being large. The question as to the existence of pleuro-pneumonia among cattle in Maryland was brought up.

Mr. Seth offered a preamble and resolutions, as follows:

"Whereas, during the past few months the Western and Southern agricultural press has asserted in the most positive terms that contagious pleuro-pneumonia exists, and is on the increase among the cattle in many sections of our State: and whereas such assertions, whether true or false, are equally damaging to our interests as breeders of improved live-stock; and whereas we believe ample provision for stamping out the disease has been made by the General Assembly of Maryland in its act of 1880, which needs only vigorous enforcement to accomplish the purpose; and whereas the Governor has asked our assistance in ferreting out the existence of the disease, which is in many instances concealed until the diseased animals have been disposed of, thus adding greatly to the dangers of its increase: Therefore

"Resolved, That we tender our thanks to the Governor for his declared intention to put in force the act of 1880, and that we respectfully appeal to him to at once issue the necessary proclamation and quarantine the herds where necessary, and pledge him our hearty co-operation.

"Resolved, That each member of this association be pledged to send to the secretary the location of all animals or herds affected or supposed to be affected with this or other contagious disease, to be by him transmitted to the Governor.

"Resolved, That it shall be the duty of the secretary to keep secret the sources of such information."

Mr. Seth, said these reports hurt the sale of Maryland stock in the West and South, and it must be shown that there is a determination to stamp out the disease if it exists. It is understood the Governor proposes to have diseased animals slaughtered, and to quarantine herds where the infection exists. No compensation is proposed for the slaughtered beasts, on the ground that such cases are hopeless. Mr. Seth said that dairymen dispose of infected animals as soon as they discover them.

Dr. W. H. Rose, veterinary surgeon of the United States Agricultural department, and who had been detailed to look after pleuro-pneumonia in Maryland, by invitation addressed the meeting. He detailed the particulars attending the disease among the herd of Mr. Slade, near White Hall, Baltimore county, and Mr. Moore, Sandy Spring, Montgomery county, where he said the cases were clearly defined. He described the disease as both contagious and infectious, and said the dairy stables about the city are pest places that should be abolished. As long as they remain the disease will exist. He was surprised that any cattle-breeder should say it does not exist in the counties he named. He had kept his movements in looking up the disease as quiet as he could, and his action has been dictated by a regard for the best interests of the breeders. The disease is transmitted by the sale of cows from infected herds, and now has a new nest in Montgomery county. Quarantine is not generally strict enough. The animals should be destroyed or entirely isolated. He visited all the dairy stables about the city, and on Tuesday found an acute case in South Baltimore. All cases unfortunately do not die, but convalescents can transmit the disease for three months and "clean" cattle suffer by contact with them. There is no protection against such, and dealers can buy and sell these animals. There is no spontaneous case; all come from contact with the disease in some form; food will not produce it. The best prevention is for the State to give the veterinary surgeon more power. The infected animals are not watched closely enough. It would not cost much to watch where they go and whence they have come. The dairy stables in the city are so thoroughly infected that he did not know what is to be done about them. Nothing short of applying the axe will suffice, for they are infected six or seven inches in their soil and up to the roofs. Inoculation against the disease is now being tried thoroughly on Mr. Slade's place, and Dr. Rose said he hopes for much from inoculation. But he wanted the improved stock breeders to clean it out and get rid of the dread disease by stringent measures. The first accurately defined cases here date back to 1868, and since then it has been transmitted. It got into Virginia from Washington. It exists in other States near large cities, and the dairy stables spread it. It is a slow and insidious disease and not a sudden contagion.

Messrs. Seth, Harrison, Rogers, Emory and others spoke on the question. It was agreed that not a single case exists in any blooded herd in Maryland. The preamble and resolutions were adopted.

Mr. Harrison read an interesting paper on ensilage for cattle food, which is given elsewhere in this issue of THE AMERICAN FARMER.

Votes of thanks were tendered Mr. Harrison for the paper, and to Dr. Loring, the commissioner of agriculture, and Dr. Rose for the pleuro-pneumonia examination.

THERE has seldom been a time when those who bred pure stock to sell have had a brighter prospect before them. Prices of cattle have, as everybody knows, been higher this year than they ever were before, and this has naturally called attention of farmers and others to the profits of those who had good heaves to sell. Hogs, too, have been exceptionally high.

Stable Management.

Much depends upon the groom in the management of horses in the stable. Frequently very poor grooms get control of good horses and the owner suffers the loss resulting from their incompetency. It is more difficult to find a competent groom than it is to find an experienced farmer, skilled mechanic, or practical sailor, because there is no rule or mechanical standard by which to determine the groom's competency. An efficient groom will keep the stable clean, and purified from the carbonic acid gas generated from the lungs in respiration, and the ammonia escaping from the excrements, so that the horses will not breathe these gases, which create disease. He will arrange in all ways for the comfort and good health of the animals placed in his charge; he will have "a place for everything and everything in its place"; he will be kind tempered, humane to his horses, and faithful to his employer, and will understand his business, and have honesty to execute the trust with fidelity, vigilance and economy.

In many stables there is a head man, or superintendent, who takes the responsibility of managing the stable. He feeds, or sees that the grain is properly measured out. He keeps order, oversees every department, secures cleanliness and vigilance in the servants and has the power to discharge help for inefficiency or bad conduct, which has a powerful influence over their good behavior. He provides food, superintends shoeing and attends to the repairs of the stable. He does everything that an agent can do as well as the principal.

Feeding is one of the most important duties in the stable. Horses require to be fed at regular hours, and in such quantities as will keep the subjects in condition to perform their daily labor. Horses at work require about two per cent. of their live weight as the daily allowance of food. From 16 to 18 lbs. of grain, and an equal weight of hay, would be considered a liberal allowance for a large horse in full work. Small, or idle horses, would not require more than one-half of that amount, as the quantity of food will depend upon the size and the amount of work required of them. They must be fed enough to supply the natural waste of the body, and to re-supply the substance exhausted by the labor performed.

It is not good policy to let work horses get thin. It costs more to put on flesh than it does to keep it on. Flesh that becomes hardened by exercise will be kept up with less food, under the same work, than it took to put it on. From 15 to 30 lbs. of food will about supply the daily consumption of horses large and small.

The English cavalry horses are fed 10 quarts of oats and 12 lbs. of hay three times a day. The American cavalry horses have had the English rations increased to 13 or 14 quarts of oats and an equal amount of hay three times a day. The Hunter, in the season, is allowed from 16 to 18 quarts of oats, and about 8 lbs. of hay, fed five times a day. The Race-horse is allowed from 18 to 20 quarts of oats per day, and nearly as much hay as the Hunter, being usually fed five times a day.

The feet and legs of horses require particular attention. It is an old saying with horse-men, "Keep the feet and legs in order, and the body will take care of itself." The legs are the first to fail. The horse, when brought in from severe, protracted exertion, should be rubbed down dry. His legs, from the knees and hocks down, should be well hand-rubbed, so that friction will create insensible perspiration; that will tend to prevent swelled legs, stiff joints, contracted tendons, and sprung knees. When the legs are seared from over-driving, they should be bandaged with wet cloths, to take away the heat, and prevent wind-galls, that prove eyesores, and which, without diminishing his capacity for labor, materially affect the market value of the horse.

The plan of stuffing the feet twice a week in dry weather, is adopted by many with horses used for fast work. The stuffing generally used consists of equal parts of clay and cow dung. Moss or tow is a cleaner stuffing, and quite superior to clay as an antidote for thrush and frog diseases. It can be packed in dry, and wet afterwards. It will leave the feet sweet, clean, and soft, when washed out regularly with warm, salt water. Stuffing prevents the feet from becoming dry and brittle.

Stalls for Cattle.

There are serious objections to some of the features of the customary cattle stall. Double stalls are well enough where one can rely upon always having a pair of cows or heifers that can be confined with sufficient length of rope or chain to secure comfort without danger of their hooking each other. A tie by the neck gives ample room for this. A tie by the horns is admissible, provided it is done by a soft wide strap or rope, well covered, to prevent cutting at the base of the horns. But all mischievous or vicious animals had better be given a single stall, thus depriving them of the temptation to annoy others.

The serious objection to the cattle stall as commonly constructed, in ordinary stables, is the manger across the head of the stall. This is, (1) a receptacle for stale hay, weeds, and the dust from these, and (2) cattle are so accustomed to stand with the head over the manger, that in lying down they do not step back sufficiently to be entirely clear of the manger; but lie with the neck cramped, and in rising, the manger is directly in the way. In this position the cow cannot rise until she has first got her head above the manger, and, as is often observed, the act is a very difficult one to accomplish. What is infinitely better than the manger in common use, is a hay rack, extending from and communicating with the hay floor above, thence down to within, say three feet of the floor. This may rest upon the partition dividing the stalls, extending over it each way, thus accommodating both stalls. This prevents all accumulation of refuse, as the hay is always taken from the bottom, and when the hay is eaten, the rack is empty and clean, and in order for a fresh supply. This rack is out of the way of the cow in lying down and rising, and in such a stall she will be found always to occupy such a position when down, as to make it easy for her to rise. A stable with width sufficient to admit two rows of stalls, with an alley-way between, is as capacious with the upright racks when 24 feet in width, as when 28 feet with the manger in common use.

Fastening by means of a stanchion is an abomination, by reason of its being a punishment to the cow, as much so as the stocks are to the criminal. Cows in the recumbent posture incline to change the position of their head and neck by placing the head around upon the side of the body. This is readily done if they are properly fastened by the neck, but is, of course, entirely out of the question if secured by the stanchion. Licking the body is a source of comfort not permitted to the cow confined by the latter method. There are also other objections. The hay remaining before the cow during the night, or at any time, constantly receives her breath, and becomes offensive therefrom. The cow fastened with the stanchion finds it difficult to rise. When occupying certain positions it sometimes requires repeated efforts before she can get upon her feet. The use of a manger which is cut down in front of each cow, 12 to 16 inches, thus permitting the cow to extend her head and neck into the manger, is objectionable, on account of forcing the animal to breathe upon the hay placed before her. The stall floor should be raised about 6 inches, and have a fall

towards the gutter of about 1 inch. The feed box can be placed in one corner of the stall, if the stall is a single one, and in both corners, if it is a double stall. It may be placed upon, or near the floor, and the side towards the cow should be flaring, that the muzzle may easily reach the bottom of the box without discomfort.—*Nat. Live Stock Jour.*

Skim-milk and Flaxseed for Calves.

A correspondent of the National Live Stock Journal asks, if cotton-seed oil meal will produce the best results with skim-milk. The editor replies:

Our correspondent need have no fear of the result in raising calves on skim-milk and oil meal, when properly and liberally fed. Skim-milk and grass alone will raise good calves, if the milk is abundant and not allowed to get too sour. When too sour, it causes calves to scour, and thus counteracts its good effect. Skim-milk is well adapted to raising heifers for the dairy, as it is rich in albuminoids and phosphate of lime, to give a strong muscular and bony development. A little more oil would improve it, and for this purpose flaxseed is a cheap addition, effectually replacing the cream skimmed off. The large percentage of oil it contains prevents constipation, as well as scouring. Flaxseed should be boiled in four times its bulk of water, and it then forms a gelatinous mass. A little of this—say, a tablespoonful of the jelly—mixed with warm skim-milk, is enough for a calf from one to three weeks old. As the calf grows older, this amount is increased. If oil meal is used, it should be linseed meal, and not cotton-seed meal, for calves. Cotton-seed meal is not so easy of digestion—is rather constipating—thus adds to this quality in skim-milk. With the skim-milk and flaxseed we raised grade Jersey heifer calves to five hundred pounds' weight at six and seven months old, last season. It is doubtful if they would have been better fed on new milk. When the milk becomes short, linseed meal may very profitably be added.

Overloading Cows' Stomachs.

When cows are changed from scanty to flush feed, it often happens that the benefit of the more liberal supply is neutralized for some time by allowing them to gorge themselves to the extent of uncomfortable fullness. An excessive distension of the stomach produces inflammatory action and impedes digestion, and tends to diminish the flow of milk, and to impair its quality. Overloading a cow's stomach invariably gives a strong and disagreeable animal odor to her milk, and injures it for butter or for cheese making, and also its healthfulness for food. Such an overloading is always indicative of a double loss—a loss from failing to utilize as fully as might be the flush feed, and a previous loss from a supply of food insufficient to enable the cows to give as much milk as they are capable of giving.

When cows are fed with a liberality that develops a full flow of milk, they will not overload with a food so little concentrated as green grass. The fact that they do overload is an evidence that their previous food was too scanty for profit, and consequently that loss has been endured on account of it. But when such a course of feeding has existed, and a change is to be made to a better one, loss from over-eating may be prevented by admitting the herd gradually to the new feed, and supplying them with all the salt and water they desire. The increase in the new ration should never be so great as to change the flavor of the milk.—*Nat. Live Stock Journal.*

MR. WHITRIDGE's agent in Scotland has succeeded in securing four more Potted Angus heifers to his liking, and they are expected to arrive here in a few days.

Foot-Rot in Sheep.

The disease commences between the claws of the hoof, where it causes irritation, heat, and, usually from the first, slight lameness. There is a very pungent, acrid, and offensive stench present. This is one of the surest tests by which those acquainted with the disease judge of its presence. It gradually works its way around under the hoof until it is loosened, and the whole foot is a mass of offensive disease; and often, where it has been permitted to run for any length of time, a number of a flock may be seen feeding upon their knees. Usually, at this stage, the foot becomes fly-blown, and often a large number of the resultant maggots may be taken from the feet. Of course, this is very painful to the victim, and rapidly reduces the flesh and strength of the sheep; but, being confined in its immediate work to the locality of the foot, it is surprising how long the poor victim will endure the strain; and it sometimes may recover without curative aid being applied.

With such a disease, the treatment must be heroic and very thorough. The whole flock—every foot even in the flock—must be examined. All must be trimmed carefully, and from every diseased foot the hoof carefully cut away, just as far as the disease has spread under it, even if the whole has to be cut entirely from the foot. To every foot, whole or diseased, must be faithfully and carefully applied, with a swab, a mixture of pulverized blue vitriol and spirits of turpentine.—*Cor. Nat. Live Stock Jour.*

Something Green for the Pigs.

How many readers of the Gazette have at this time a lot of perhaps pretty well bred shoats or pigs confined in unwholesome pens, with little or no shade and poor water, trying to summer them through on scant rations of corn, supplemented possibly by a few potato peelings and a little dishwater? Unless we are mistaken there are a good many such in every township, and the most of them are not being treated as well as they might be, notwithstanding the high prices of grain. We venture to say that there is not one of the farms where hogs are so treated that has not a variety of green food growing, on which a hundred of them could thrive if it was only fed to them, and furthermore, that the labor of feeding it out would be about the only appreciable cost.

It is, we know, an old foggy notion with many that corn is about the only thing that ought to be fed to hogs, while a great many other men are satisfied that pasturage is desirable, but think that, unless they have a pasture, green food is out of the question. That is a great mistake, for a great many gardens contain weeds enough to keep half a dozen shoats chewing; and any one who thinks bothering with weeds is too small a business can arrange to have a succession of say green rye, oats, millet and then green corn, that when most succulent can be cut up and fed out with little labor, unless the number of hogs is very large, when, if regularly and systematically done, it requires time and muscle.

Corn is the great grain to put on the fat with in the fall, but the frame-work to hang it on can be built up in the summer, mainly out of readily accessible food that represents but a fraction of its money value. Don't be afraid to keep them eating something of the kind as much as possible, or that some corn along with the green food will do any serious harm, for a variety is much preferable to any single food. The most successful pork raisers do not make old corn and raw potato parings soaked in well water their main reliance from June to November, but use pasture; those who cannot take their hogs to a pasture, can take the pasture (or its equivalent) to the hogs.—*Breeders' Gazette.*

The Dairy.

How Fine Butter is Made.

The process of making butter is an important one, for the best butter may be spoiled and poor butter may be improved in the working. When the butter is churned it is taken from the churn and placed on a smooth maple, birch or chestnut table or other butter worker, or put into a bowl. If the churn will admit of it, the buttermilk may be drawn off, and clear, cold water poured into it, and the butter washed in that way in separate waters until it runs off quite clear, and the butter is quite free from milk. This is indispensable if the butter is expected to keep well. It is then salted at the rate of one ounce to the pound of butter. The butter is pressed out with the ladle, and never to be worked by the hands under any circumstances, and the salt is spread over it; it is then doubled and pressed out again and cut and gashed with the ladle, but never rubbed or plastered, but only squeezed and pressed, until the salt is pretty evenly mixed; it is then put away in a cool place for 24 hours or less, as may be convenient. It will then appear streaky and patchy, and is worked over in the same way as before until it becomes free from this streakiness, and even in color, by the thorough mixture of the salt. This is done by squeezing it with the ladle, a small piece at a time, and pressing it out into a flat sheet, so as to get all the salt and moisture in it evenly through the mass. The color is then alike all over. No more working is then required. The first working requires about 10 minutes for 20 or 25 pounds the second about 15 minutes. It should then break with a coarse, uneven fracture, much like that of a piece of beeswax, and should appear when cut of a granular texture and quite free from greasiness, and fine drops of clear brine should follow the knife as it is cut. It is not well to try to get all the moisture out of the butter, as this improves its texture and flavor. If the cream has been well kept and the butter well made and churned, this should have a very sweet and fragrant scent, quite free from acidity or pungency. It is a peculiar scent, and belongs only to the best butter, and when this odor is absent, the right flavor is wanting, because the scent and the flavor as well, are all attributes of pure fresh butter. The butter should be packed as soon as it is worked the last time; no butter needs a third working; the package should be quite free from all disagreeable scent or impurity; white oak, spruce, or white ash are the best materials for the tubs or pails. White oak has an agreeable scent when fresh, and stands first for butter packages. The package should first be scalded, then rinsed in cold water, then rubbed with a little salt, then rinsed with a little water, just enough to wash off the salt, but not to freshen the wood, and the butter is packed in the damp pail at once, being pressed down solid so that no air-holes are left. The pail is filled completely full, and may be covered with a piece of muslin dipped in brine, or with paraffine paper, and closed up at once tightly and put away in a cool place or sold, which is the best plan.—*N. Y. Times.*

Congress has adjourned without passing the bill intended to prevent the oleomargarine frauds. In its report on sham butter and cheese, the House Committee on Commerce declares emphatically that these nauseating frauds are so fast increasing that our immense and valuable export trade in the genuine product of the dairy is being ruined. American butter and cheese are fast falling into disrepute abroad. The British Government is contemplating prohibitory legislation to be directed against the entire American trade in dairy products. Our general Government should protect its farming interests against the manipulators of gut fat and grease of questionable origin.

Poultry Yard.

Varieties of Fowls.

The Brahmas are good mothers in general, but sometimes one is clumsy and stupid, recklessly putting her foot or feet, with the whole weight of her body, upon the eggs, and also on the chicks as she fusses about at hatching time. However, the dunghills and others with better pedigrees will do that now and then, and seem even to lose all their motherly sense, for as soon as a chick chips the shell they will break the shell and pull them out, of course destroying them. The confinement of three weeks at setting with irregular exercise and eating, seems to throw some hens off their balance. It is always well, after incubation begins for the season, to have several hens sitting at once, so that as fast as the chicks appear they can be moved, temporarily at least. It is also well to aim to have two or more hens come off at the same time so as to unite flocks if the hatch is not a good one. In mild weather one hen can take care of and scratch for 18 or 20 chickens as well as a half dozen, and then one or two hens can be discharged so as to lay again soon. It is a nuisance to have so many cluckers about when the quota of chickens is so small—just as it was during the war to have too many colonels and brigadiers for a few hundred men.

The Plymouth Rock is another good breed, with qualities very much like those of the Brahmas, and a cross between the two is very much commended by some. The Plymouth Rocks have rather more delicate feet than the Brahmas, and that is a slight recommendation. Some strains are fully as large as the Brahmas, though usually they are smaller. But being a trifle smaller they are also more active, and when confinement is necessary will give a little more trouble. In the other large breeds I could never see anything to commend them over the Brahmas. The latter are large enough, and the coochins, Shanghai and "the likes of 'em" are lazy and ungainly. The various top-knot and Bantam races are good for fancy playthings to amuse the children, and women who bang their hair and keep lap dogs, but I can't conceive that any farmer depending on his farm for a living would long care to have them about. The Leghorns are good layers and are pretty, but they have most of the faults that pertain to light-bodied breeds—are thievish, lawless, insubordinate, and pester the neighbors; while if confined at home they pester the owner. On the whole, I have never seen that the Brahmas can be bettered so long as partial or total confinement is necessary.—*S. P. in Breeders' Gazette.*

Killing Fowls.

The custom still in vogue in some parts of the country, of *wringing the necks* of fowls, to me, seems a relic of barbarism. It is not only cruel, but is unsanitary. When killed in this way, instead of cutting the head off, the blood all remains in the body, rendering the flesh unwholesome, as it would be in the case of the ox. This blood is very putrefactive, as all may know by allowing some to remain in the sun for a half hour in warm weather, omitting a bad odor in a very short time. When we remember that about one half of the blood is composed of the waste and worn-out portions of the body, semi-poisonous, and that this particularly, with the purer portion, soon putrefies while remaining just where they are in life, it is evident that all of the flesh will become more or less affected by this putrescent mass. Instead of this barbarous wringing of the neck, it is advisable to cut the head off at a single blow with a sharp instrument, that the blood may freely flow with all of the waste matter. That this may be done effectually, it is well to hang the legs as soon as possible that the blood may flow while still warm.

I will add that when certain epicures let the prairie chickens thus hang until they almost fall apart, that they may be "tender," they show but little intelligence, if, indeed, they care anything about the results—simply the present gratification of a vitiated taste. Such will be very tender, simply because decomposition is far advanced and the fibres are just ready to fall apart. Such food is highly relished by the crows, hyenas, and the scavengers in general, for that is their nature, their mission being to devour the filth that the higher orders may escape pollution.—*Cor. Farm and Fireside.*

Horticulture.

Tracking Notes.

Messrs. Editors American Farmer:

The late, cold and wet spring so retarded most kinds of truck and fruits as to make them several weeks later than usual, but owing to the favorable weather now prevailing, they are coming on rapidly and promise an abundant yield.

A larger acreage of peas was planted than ever before known, not only by those near Baltimore but by many at a distance. Some difficulty was experienced in getting sufficient hands to gather the immense crop, many not getting much more than half their peas picked, consequently seed will be plenty and cheap next season.

Prices were not as remunerative as during late years, only those who succeeded in getting them picked in prime condition (that is when about three parts full) realized paying prices; not more than half the peas marketed were in condition owing to the large crop and unusual rapid filling of the pods. Those living remote from market were no doubt disgusted with their venture in peas the past season; and it is well, for unless the crop can be quickly thrown into the market they will not bring first class prices. One thing has been proved however, and that is, Baltimore's capacity for using up by means of her great and growing packing interests, an immense quantity of peas. Those grown in the vicinity of Baltimore, have a world wide reputation for excellence, and we need not fear of overstocking the markets provided we can furnish peas picked just at the right time, and in proper condition for canning. For the information of those who have had no experience, or who contemplate going into the growing of peas for market, we will say, that there is no profit in growing them, under the most favorable conditions, for less than fifty cents per bushel, some making their estimate still higher.

Strawberries were unusually late and an indifferent crop gathered. Late frosts and wet weather at time of blossoming caused many to blight, consequently they were very imperfect. Home markets as a rule were better the past season than those at a distance; owing probably to lateness in ripening, thus coming in competition with northern berries.

Sharpless Seedling was, as heretofore, the favorite in the markets, notwithstanding its coarse appearance; its delightful pineapple flavor pleased the taste and caused it to bring remunerative prices. The people are not long in finding out the fine flavored berries, and will pay big prices for them and leave the insipid ones alone.

Raspberries yielded short crops as a rule, owing no doubt to the killing drought of last summer. Prices were good and those who had good crops realized handsomely from them.

The Blackberry crop not yet all gathered, is large, the bushes in many instances setting more fruit than they could mature. Prices which were good at the beginning have ceased to be remunerative for the late ripening varieties.

Apples have brought unusual high figures owing to scarcity of early varieties; we won-

der why more of the early sorts are not planted, as they invariably bring more than the late ones. Early Harvest and Red Astrachan are no doubt the best for this latitude.

Peaches and grapes promise an abundant yield, but owing to wet weather experienced lately are rotting badly. Hale's Early of the former is almost a complete failure owing to its susceptibility to rot upon the trees before ripening. I am much pleased with the Talmor or Champion grape. It has fruited with me for the first time this season, and at present writing (August 8th), is coloring up finely, bunches medium in size, very compact and berries large.

Early Cabbages were good and comparatively free from insect ravages. The white butterfly is busily engaged upon the late crop, however, and the probability is that we will have to import our sour kraut from Europe as usual, this fall. Cannot some one find out a really good remedy? We would like to hear from our old friend J. W. again. Canteloups and Watermelons are late, but promise a fine crop. Early Tomatoes are badly diseased in most sections, but are bringing good prices. Late ones promise well if left alone by worms, of which we will be better able to speak in our next communication. R. S. C.

Tomato Culture.

A LEAF FROM 1892.

For the purpose of comparing the results of the various methods of handling plants practiced by gardeners with the object of inducing earliness, I arranged my early tomatoes into six divisions. The seed was of the *Acme* variety and the conditions were as nearly as possible the same except where noted. In plot No. 1, which turned out the best, there were fewer plants by a fifth than in the others.

It is of course generally understood that the whole interest of the subject centres in the first tomato week, when prices rule high and when a few extra bushels per acre are worth striving for. That the season was unusually late does not, in my opinion, affect the value of such experiments one way or another.

In four of these divisions each alternate row had the tops mowed off after sufficient fruit had set. This was done cautiously so as not to expose too much of the fruit left to mature. Except that the vines had a more tidy appearance and the work of gathering the crop was made more pleasant, there was nothing else to note. I had heard this practice highly spoken of, and thought there might be something in it, hence was somewhat disappointed.

How little *extra early sowing* has to do with the early maturing of the crop may be judged of by the following: No. 5 was set with large, handsome plants sown 20th January, and transplanted May 6th. On the same day I set out on No. 6, a lot of tiny specimens, when sown I neglected to note, but they were still in the seed boxes as late as the 20th of March. These two lots came forward as if they had been one, each plot producing its first two bushels on the 27th of July.

The effect of *pinching in the frame* was well noted. Of course all plants sown as early as January had to be pinched to keep them within bounds. No. 5 crop, as we have just seen, was no earlier than No. 6, the plants of which were not pinched. No. 1, *unpinched* gave 66 sound tomatoes on the 19th, the only ones then to be seen; on the 17th it gave five pecks to one against No. 2, of the same age and date of planting but *pinched*; on the 22d it gave 24 bushels to 1, after which date the produce on said two lots was nearly equalized. No. 1, sown 27th February, was also three days ahead of No. 3, sown 20th January; the latter *pinched*.

On purpose to watch two *pinched* lots sown at different dates but transplanted at

the same time, plots 3 and 4 were marked off. The dates of sowing were respectively 30th January and 24th of February, and they were set out on the 27th of April. The earliest sown had considerable advantage in earliness, and, the first week, in productiveness, but both were comparatively late, that is with respect to No. 1.

Early transplanting would seem to be important. No. 5 was exactly a week later than No. 3; the dates of transplanting being respectively May 6th and April 27th. Transplanting at the earlier date should not be risked without having plenty of plants in reserve.

Recurring to No. 1, from the teachings of which my future practice will be regulated, I may remark that the seeds were sown in boxes in the greenhouse, February 27th, and pricked out into a mild hotbed on the 31st March. The soil used was the rather stiff earth in which cabbage plants had been wintered. The plants were given the usual space, say 4 by 4 inches, and after being well established were kept so that they should not require pinching, by being exposed to the air as much as it was safe to do, and kept rather dry at the root. The plants when set out were perhaps a foot high, well proportioned and tough, for they afterward came through a pretty sharp frost unscathed.

With the views expressed in the following extract from the *Gardeners' Monthly* of July, 1859, I heartily agree: "One year, in particular, my plants were likely to become too large before the planting season and I pinched them all back. The result was, that instead of having my plants well proportioned, with a good strong leading shoot (near to the top of which the first fruit always sets,) the lateral branches all became leaders, and I had a mass of leaves and branches, to the exclusion of that circulation of air in the bed which is necessary to harden the plants for out-door transplanting."

I will add, in conclusion, that the foregoing results were watched by several of the pickers who were interested in the experiments, and that it was impossible to predict from appearances, almost up to the day that the first tomato changed color, which division would come out best. After the first few days they got plentiful all along the lines and were not considered worth further notice.

JOHN WATSON.

The Corn Worm.

Messrs. Editors *American Farmer*:

In this section of Virginia, near Fort Monroe, the farmers find it impossible to raise sugar corn. As soon as the kernels are formed, a green worm is found in the ear, at the top, and it increases in size, working its way downward consuming the corn. It seems as if some bug or miller deposited an egg in the silk of the ear. I have counted a hundred worms in a hundred ears. Can you or your readers suggest any method by which this destruction of the corn can be prevented?

The luscious sugar corn of the Northern States does not do well here.

August 1, 1882.

[This insect is the corn worm, *Holothrips armigera*. Prof. C. V. Riley, the entomologist of the Department of Agriculture, says it naturally prefers the more tender ears of the sugar corn to the common field corn wherever the former is planted in the Southern states. Many remedies have been suggested for this pest, but none of them have given very satisfactory results.—Eds.]

An easy way to raise Asparagus in the garden is to plant it two feet apart in a single row, and let the roots reach out, for their nourishment, as far as they may. If not feasible to lengthen the row sufficiently to produce all the Asparagus desired, a second row may be planted not nearer than four feet to the first, and even more space may be given.

How to Pack Grapes for Market.

When the grapes are fully ripe the bunches should be cut from the vines with a pair of hand-shears, always taking hold of the stem when moving the bunch. This precaution is necessary, so that the "bloom" may not be rubbed off by handling the berries. The grapes are then carried from the vineyard to a cellar or packing house. All green berries should be removed from the bunches before packing. This can be rapidly done by holding up each bunch by the stem and cutting out the unripe berries with a pair of long, pointed shears. Grapes bring higher prices in New York market when packed in small boxes, holding not more than five pounds each. These boxes are now manufactured extensively in grape-growing districts, and at very low prices, by the quantity. They are made of either very thin slips of wood, or stiff pasteboard. When ready to pack, the bunches should be carefully placed in the boxes one at a time. The box should be shaken a few times while being packed, so that the fruit will settle firmly and not be displaced by the jarring of railroads, or rough handling on the way to market. When the cover is removed from a box of grapes that has been well packed, the stems of the bunches are not visible and the berries of the top layer should be level with the side pieces of the box. Eight, ten or a dozen of these small boxes may then be encased in a strong, but roughly constructed crate, similar to those used by Southern "truckers" in forwarding vegetables and peaches to Northern markets. The consignee should be notified by mail of each shipment, stating clearly, but briefly, the quantity and quality of the fruit shipped.

The bunches of grapes should be assorted at the time of gathering. Small or straggling bunches should not be packed in the same box with well-formed shouldered bunches. Each kind will bring more when packed separately. The class of buyers who are willing to pay high prices for large and well-formed bunches will not buy poor bunches at any price.

Carelessly gathered and badly packed grapes, sent from a distance to New York, or other Northern markets, arrive in a damaged condition, and are sold at a low price if at all; and this has heretofore been the case with much of this fruit shipped from the South. There must be a reform in this matter, or grape-growing for the market will not pay.—*Fruit Recorder*.

Old Fashioned Flowers.

I am fond of old fashioned flowers. I have heard my mother say that my grandmother never thought of going to meeting, in the summer time, without a sprig of Rosemary, or a cluster of Pinks or Gillyflowers between the leaves of her hymn-book. I like the old custom and I like the old flowers.

Now, that the Sunflower is becoming popular, perhaps there will be a revival of interest in other flowers which our mothers and grandmothers made their gardens gay with. I hope so. Many of our modern flowers are very fine, but most of them lack the solid merit which belongs to the sturdy old inhabitants of the gardens of twenty-five and thirty years and require more care and attention.

I always have an "old fashioned corner" in my garden. Here I grow Larkspur, Marigolds, Poppies, Gillyflowers, Grass and Glove Pinks, Johnny-jump-ups and Rosemary, and over the fence I train Sweet-peas and Morning-glories. Perhaps it is because we see so few of these old flowers now-a-days; perhaps because most lovers of flowers have a fondness for these old time favorites; any way, "my old fashioned corner" is the most frequented part of my garden. Last summer I cut a bouquet from it for an old lady who came to visit at a neighbor's.

Into it all the flowers I used to see in my grandmother's garden—Bachelor Buttons, blue as the sky above them, with daintily fringed petals; Pinks of beautiful color and delicious fragrance; Velvet Marigolds, gorgeous in brown and gold; spikes of Larkspur, in pink and blue; Sweet-peas in many colors and of a spicy sweetness that set one dreaming of "banks whereon the wild Thyme grows," and Gillyflowers that clustered along the stem like little roses. How pleased the dear old lady was with the flowers! Her eyes sparkled as she held them up to her face, and she touched them caressingly, lingeringly, as we do a friend we have not seen for a long time. "It takes me back to old times to look at them," she said. "We used to grow every one of these flowers at home. It seems like seeing old friends. Mother used to think there was nothing half so sweet as Pinks. The day after she was buried father took up a great bunch of them from her little garden and set it on her grave, and when I was there last there were Pinks growing there. I thank you for giving me so much pleasure. I love all flowers, but somehow these old ones seem best and dearest. There's something homelike about them."

All the kinds I have named can be grown with the greatest ease. They do not need coaxing. Spade up the soil well, give it a dressing of manure, and, when all danger of frost is over, sow your seeds. All you will have to do after that is to keep the weeds down, and see that your plants do not suffer for lack of water if the season is dry. These old flowers will give you an abundance of bloom, and you will have all you care to use for vases and to give to friends, and your garden will not look "as if it had been robbed" at any time. Give the good old flowers a trial and see if you are not better pleased with them than with the fashionable ones that need coaxing and petting, and then half the time, prove failures.—*Cor. Am. Garden*.

The Grange.

Grange Success.

A skillful, successful general, the thrifty merchant, the skillful pilot, the devoted minister and the wide-awake farmer, will sometimes stop, and looking back over the past, review his labors to detect his errors, if any there may have been, and to mould his future operations and plans into more exact accordance with those principles to which he may properly ascribe his present prosperity.

In no vocation of life is this review of more genuine and practical importance than in those associations of individuals who seek in them the promotion of their spiritual, social and temporal needs. In all these are those who are given, or who assume, the leadership, and where as in all other things a wrong choice may have been made, or brazen impudence may have paralyzed the many by its very audacity, and have seized it.

The Grange is in no wise different from other associations. It has had its good leaders, its bad ones, and some neither positively good nor bad.

Springing directly from the farmers who, as a class, have ever taken too small a share in public assemblages, the Grange has aided and carried to successful completion not a few well devised plans, not only for their own improvement, but for that of the community. First in importance, and in far reaching, but practical, results, is their pecuniary aid to those cases which tested the responsibility of railroads as carriers, with their consequent liabilities as such to the jurisdiction of the Courts of Law and to Legislative control in their charges for transportation of freight and passengers.

Then comes their effective aid to the Tobacco interests of the country by lessen-

ing the Internal Revenue Tax upon the manufacture, and the removal of many annoying restrictions by which it was encountered.

Then their successful fight to prevent men patenting an old and long-used article, and exacting pay for its use and compelling it from men who were too poor and too far removed from the place of sittings of United States courts to incur the expense of a trial in them, terminating, as it probably will, in the enactment of a law that the manufacturer and seller of a patented article is liable for the infringement of patent rights, and not he who purchases in the open market.

Perhaps the grandest achievement accomplished by them is the extortion from an unwilling and reluctant House of Representatives which is under the influence of manufacturers and their allies, the railroad magnates, of a seat in the Cabinet of a "practical agriculturist," so that hereafter there may be some hope that such implements as farmers use and articles their families wear may not pay more than a fair share of tariff taxation.

Every one of these benefits have been achieved by dint of hard labor and in the face of fierce opposition. None have ever been of more direct pecuniary benefit to the whole country, or promise to be of more in the future. No other merely secular organization has ever shown by its acts that utter abnegation of self, and that the claims "of country and mankind" were considered equal to their own.

All honor then to these men, bold and true, who have made the force and efficacy of concerted action felt even in high places, and proved themselves unselfish in the midst of a selfish generation.

Russum, May 27, 1882.

MONTGOMERY COUNTY (No. 7) Grange met in regular quarterly session at Darnestown, on 27th July. Further steps were taken to procure a law for the inspection of fertilizers by the State, and a committee was instructed to keep articles in the county papers on the subject. A strong determination was expressed to persist in demanding protection for sheep—the grange representing as it now does the respectable element in the county, cannot fail to accomplish its object if it only perseveres in keeping the matter before our possible legislators. More analyses of the lime rocks in this county were given and the statement made that the granges, as an organized body of farmers, had got analyses made by the Department of Agriculture for nothing, that would have cost private individuals \$800.

A long discussion of the merits of the different self-binders was had. Most every member was pleased with the kind he had used, but the Deering, and especially the Esterly, received most praise for simplicity, variety of work and lightness of draft.

Suitable resolutions of regret were adopted on the death of Mrs. Jackson Day. In the afternoon a public meeting was held with addresses and music.

LIBERTY GROVE, No. 54, Montgomery county, dedicated its new hall on August 2d. The service was performed by State Master Defries, who also delivered an address which was much applauded as a timely presentation of the necessity for and usefulness of the Grange organization. The weather, unfortunately, was unpropitious, but the attendance was good, notwithstanding. Liberty Grove is prospering, and now that it has a home of its own, it is believed it will grow largely in numbers and activity.

HOWARD COUNTY GRANGE will hold its annual meeting and picnic in the Camp-meeting grove near Cooksville, on Tuesday, August 20th. A number of addresses will be made. This meeting is always largely attended.

Home Department.

Fair Field and No Favor.

As long as there continue to be any weak, frivolous minded women, wrong headed men will use them as a pretext to justify the existing order of things as regards money matters, and the rest of us, it would seem, must either bow submissively to such ruling, or else seek revolution by joining the ranks of those whose ambition it is to take up their position side by side with the ruling powers on the rostrum, and by the ballot box.

It seems safe to assert, however, that a vast majority of women who are neither "weak nor frivolous," who, deeply deploring much that has moved good, honest, earnest-minded women to go unflinchingly before the world, subjecting themselves to the derision of both sexes in their zeal for "fair play," are nevertheless averse to sharing the reins of government, even to obtain the desired ends. These are supposed to be idly indifferent as to both cause and result, meekly content with what is manifestly false in their position, and in the interests of "wrong headed men" they go to swell the army of the "weak minded." The imputation is unfair; not many are supremely satisfied or meekly indifferent, but the manner of correcting the recognized "wrongs" adopted by the "advance guards" is in many points more objectionable than existing evils, and success, if attained, would revolutionize much that they hold sacred. They can, therefore, better afford to wait for the slow process of a healthy infusion of right-mindedness, whenever they have a legitimate chance for a hearing.

The wife and mother who maintains her high position in her home, which proper qualifications will always secure to her (in all matters except that of money), cannot be without some influence among those who legislate and those who make legislators; and if she so uses her opportunities with the tact which is her birthright, as to aid in securing the just "rights" and overcoming real "wrongs" without going beyond the bounds which custom has established as proper for the protection and preservation of all that is truly womanly, she should be accredited with some effective work.

Enlightened womanhood cannot be blind to the truth of many of the charges of "wrong" made by that worthy but methinks mistaken sisterhood, who continue through good report and through evil report to knock at the doors of legislative halls for admittance in order to obtain redress, but it will be long ere the majority of the "wronged" will willingly forsake their stronghold of sheltered usefulness within their homes to assume the rougher duties which must inevitably devolve upon them, if these existing hedges were removed. Those of us who would or could use the ballot-box to any good purpose possess powers infinitely beyond a mere vote that the most depraved can so easily cancel, which we are at all times privileged to use in behalf of just legislation as well as of just recognition of our equality in the matrimonial copartnership. Under a general government that is claimed to be democratic, the male head of a family is granted a perfect autocracy in all that pertains to property or the control of minor children. In regard to real estate, it is true the wife holds a check upon the disposal of one-third, but she has no other control over it while the husband lives, and if he dies before she does it is at his royal diction how the remaining two-thirds shall be disposed of. The law gives it, in case of there being no children, to any relations of his, however distant or unheard of, rather than to the wife whom at the altar he "endowed with all his worldly goods," and the children she has borne may at his discretion be committed to the guar-

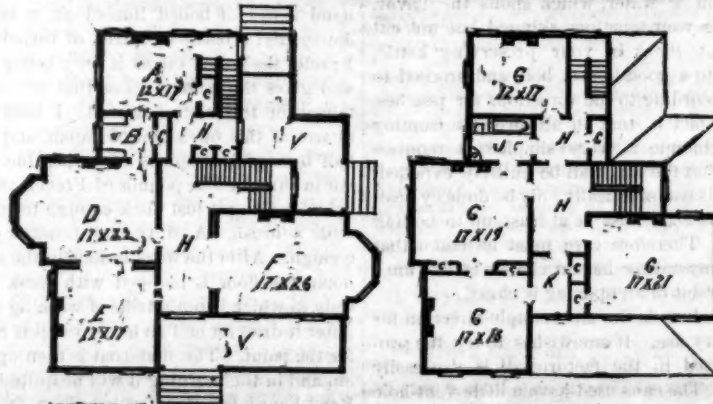
A Country Home.

DESIGN 18.

PLATE 16



A COUNTRY HOME: PERSPECTIVE VIEW: J. B. LEGG, ARCHT. ST. L.



1ST FLOOR PLANS TO DESIGN 18, PL. 16

2ND FLOOR

A COUNTRY HOME.—The floor plans give a design for an eight-room suburban or country home, suitable for a small, refined family, wanting all the privacy and elegance of a first-class dwelling, and yet embodied in a small space without any great outlay or expense. The broken outline of the building, with gables in every direction, finished with open tracery work and high pitch roof, and the octagonal bays on the right and left, with the large ornamental porches front and rear, make a very pleasing and attractive building. The main stairs are placed in a side hall in rear of the parlor, leaving the wide front hall free of obstructions, with sliding doors between same and parlor, while the stair hall forms a side entrance and a communication to the side and rear porch. The rear hall, to the right of the kitchen, forms a lobby between main hall and kitchen, with a flight of stairs leading from same to second floor, while the further end forms a vestibule entrance from kitchen to rear porch, with stairs from same leading to cellar, and the space underneath the return flight utilized as a kitchen closet. D, on the left, is the dining-room, communicating with the sitting-room in front through sliding doors and the pantry in the rear, with the kitchen adjoining.

Additional information may be had by addressing J. B. Legg, Architect, St. Louis.

dianship of strangers. But to their credit be it said that, as a rule, men are better disposed in this respect than the law, and govern their actions in this matter according to the dictates of justice, if they can bring themselves to look the possibility of death in the face sufficiently to realize the necessity for any provision for such an event.

It is however during the husband's life that he maintains the control of the purse strings to a degree that, if it were not so general, would be unbearable, implying as it does a doubt of ordinary capability and integrity of their wives. It is only by his august permission that the wife has one dollar at her own unquestioned disposal, no matter how she may have assisted in the gathering of their belongings. Surely these things are not just, and it is not surprising that women have grown weary with waiting for the powers that be to vindicate themselves from the dishonor attaching to this condition of things. The demand for justice will continue as long as this injustice prevails. If this generation refuses to set itself right we will hope to so influence the next, as that they will cast off this mantle of self aggran-

dizement which has verily become a cloak of shame.

Unless this "endowment of worldly goods," which is so readily promised in entering upon the domestic partnership, is the merest farce, one would naturally suppose that the privileges of ordinary business firms, at least, would be common to both parties, but this is rarely, if ever, the case. The husband may in every other respect acknowledge her capability to share his interests—yes, even admit that she is his "better half,"—yet with a ludicrous pertinacity holds his purse strings as exclusively as if his very manhood depended upon his so doing. Of course, the reasoning that women, as women, know nothing about financiering, is all nonsense. There are women as there are men who are incapable in this respect, but there are also women enough within the scope of observation of every man who asserts this fallacy who have proven themselves infinitely more competent to use their means wisely than their husbands, and business women who distinguish themselves for clear-sightedness in their transactions are by no means uncommon. Of course, no one can learn to use

money properly who never has the opportunity, whatever their sex. Certainly, in all that is required for domestic purposes (unless she has linked herself with a "Miss Nancy") the wife might be supposed to know best where the money is needed and how it will render the most satisfactory returns, and if she is informed of actual resources would be as likely to keep within bounds. What makes women sometimes reckless in the use of money is the attempt of their banker to deceive them, by crying "wolf! wolf!" when there is no "wolf"—which they are not slow to detect—when the crier is so ready to risk the danger himself.

Could any active member of a business firm conduct his branch of the business advantageously if required to apply at every turn for permission to another member who was unfamiliar with the workings of his special branch? It is usual, I believe, for each to attend to such a portion of the work as he is best fitted for, and then for the rest to trust to his individual judgment to that extent. But in the matrimonial firm the larger portion of housekeepers are continually hampered in their movements by having to consult and abide by the decision of the partner who knows little or nothing of her department. A fortunate few have a regular sum placed at their disposal for specific purposes which leaves them a degree of liberty, but the funds are rarely calculated so as to meet incalculable demands which are inevitable. When the husband encounters similar stumbling blocks he can usually overcome them by some dextrous management in his business, but if the wife gets into a "tight place" and applies to her only resource, however cheerfully he may come to her relief, he will nevertheless reckon it against her financial abilities forever after.

There is still another class of providers (?) with whom the wife has to contend for everything she gets and for many things she never gets, even of the necessities of life. These miserly men resent every application as an attack upon their own special possessions, their chronic closeness makes them feel that to part with money under any circumstances without a show of resistance would compromise their principles. Alas, for the wives and daughters of such men. They are defrauded of every natural desire beyond the barest necessities, and those they must weigh and measure until they are reduced to the lowest point of possibility ere they brave the displeasure of their petty potentate—even then too often unsuccessfully.

Between these and the nearest approximation to righteous dealing, when a regular sum is placed at the wife's disposal, comes the grand average of households, when the husband and housewife each accept the situation as best they know how; the one well satisfied with his integrity of purpose, thinking his way right because it is the usual way, the other with a mental protest applying to the lord of the manor for the wherewith to keep things going. That the kindly disposed husband can continue to keep this "wrong" constantly between himself and the wife he would cherish from every other wrong, can only be accounted for by crediting him with misconception of a woman's nature. Innate delicacy and pride restrain her from betraying the humiliation she suffers, but she rarely ceases to regard the necessity for asking her husband for money as an indignity to which he ought not to subject her.

Those who suffer most usually die and make no sign. It is only when the husband is exceptionally considerate that she can take up the defence of the sisterhood without suspicion of disloyalty. CERES.

Frequent applications of hot water to a part that has been poisoned with poison ivy will allay the itching and help along a cure.

Observations on Canning, &c.

Any paper which finds its way into the farmer's home about this time, without all the directions it can gather for the preservation of fruits and vegetables for winter use, might as well take itself out again, as it will most surely prove a disappointing visitor. No matter how expert, and at home, in this department, a housewife may be, she always wants to know how others do it—whether it may be to endorse her own practice or to get new hints. Canning is the most popular method just now for most fruits and vegetables, and is in every respect the best for merchantable purposes, and certainly has much to recommend it for private use. There is, however, a tendency to a reaction in favor of the old-fashioned preserves which were for a time discarded in favor of canned fruit. Sugar has always seemed a big item in the grocery account of the farmer, and any process that made the saving of fruit possible without it was heartily seized upon, and this led to the canned fruit being prepared and placed upon the table without sufficient sugar until most people got a distaste for it, and began to wish for the "sweet meats" of olden times. Of course the canned fruit has the advantage of healthfulness, but it is on the "pound foolish" principle to make anything to be eaten, without making it eatable; and as sugar is essential to most fruit for table purposes, it had better be used in reasonable quantity than let the fruit "go a begging," after the trouble of preparing it, therefore it may as well go to make a syrup for the fruit first as last.

TO CAN PEACHES.—Pare and remove the stones from your peaches, and drop them into a vessel of cold water as fast as you do it, to prevent them from turning dark; when this is done make your preserving kettle, (which ought to be porcelain, but if bell metal, "as bright as a button") half full of syrup, in the proportion of five pounds of sugar (granulated) to one pint of water; as soon as this syrup is clear and boiling, take enough peaches from the water with a perforated skimmer or ladle, and nearly fill the preserving kettle—allow it to come to a boil again, and to continue boiling a few minutes until the fruit looks as if it had absorbed syrup enough, then fill your jars or cans with the fruit, and when this is done fill in with the syrup. Now as to the jars or cans, if glass jars are used, all that is necessary to prevent cracking with the heat, is to fold a cloth, that is real wet with either cold or hot water, several thicknesses—spread it on a waiter and set the jars firmly upon it. When you begin to fill, put one ladle full in each, of as many of the jars as you will fill from that kettle full, and then proceed to fill them all without any fear of the glass snapping. When filled as full as you can possibly get them lay the tops on for a minute loosely, then, screw down, and in a little while try to give the screw a turn. I am sorry that tin cans have fallen into disrepute, because I like them. I never use any but new ones, and those I get from respectable manufacturers, by the dozen boxes at a very low figure, and I never had the least reason to think any one had been injured by them. The reason I like them is, that they bear handling so well, and I can box and send them about without any apprehension as to their breaking. I can also pack them away so nicely in the boxes and stow them down cellar out of the way until wanted, and then when they are empty I have no more care about them. The art of soldering them is easily learned by practice, and any one with ordinary gumption, and strength enough in the arms to hold the soldering iron, can do it. This accomplishment will serve the housewife many a good turn during the course of the year. But to return to our kettle of syrup, which will be found, after having filled all the jars of the first lot, to be

very little less than when first made. If you have much fruit to do, add each time a half pound of sugar to what is left in the kettle, repeating the process of putting the fruit in, letting it boil a few minutes, filling the jars first with fruit then with syrup, then sealing promptly—until your fruit is used up; if then you have syrup left, it will make a delicious cordial, by adding a little brandy according to taste. Always use the best fruit you can get, ripe and sound; when this is wanted for use it will need no addition of sugar.

SMALL FRUITS.—Berries of any kind may be canned nicely by the same process as peaches.

TO CAN TOMATOES.—Select the very nicest without suspicion of rot or black spots, as very little will ruin the flavor of the whole lot. If you have a large collander use it in scalding the tomatoes. By filling the collander with tomatoes and sitting it in a pan a little larger and as deep, the boiling water can be poured on, and when they have stood long enough (about three minutes) lift the collander with the tomatoes and set it one side. This will allow the tomatoes to be more easily handled and prevent the absorption of water, which spoils the flavor. Having your tomatoes skinned but not cut up, put them in your preserving kettle, bring to a good honest boil, and proceed to can according to the directions for peaches.

The fact is, that in all air-tight canning the principle is very simple. It requires only that the air shall be entirely expelled, and this can practically only be done by heat, and the heat must be at least up to boiling point. Therefore care must be taken that the temperature has no chance to fall until the last bit of an opening is closed.

The above is the most simple direction for ordinary use. If one wishes to try the process used in the factories it is also easily done. The cans used have a little vent hole in the tin lid which covers the opening. The cans must be filled with the tomatoes just as they are peeled, the lid is then soldered on, and if you have a reliable steam chamber in which to place them for processing, the small opening alluded to is left open, but if the cans have to be processed in boiling water it is best to close this vent hole also, at first. When soldered, the cans must be plunged into boiling water or into a steam chamber and the heat be kept up for half an hour. They are then scooped out on a table or bench and the vent hole, if it has been left open, must be immediately closed, or if it has been closed must be opened long enough for the air to escape and then closed at once. By throwing them in a tub of cold water any defect in the soldering can be discovered at once, as the effect is to condense the contents, and this draws in the bottom and often the sides of the cans. This drawing in of the can is a good sign when you find it in purchasing canned fruit.

CORN, PEAS, BEANS, ETC.—I have taken a good deal of pains recently to find some method adapted to family conveniences by which these can be canned, but so far have been unsuccessful. The only process I have met with calls for the use of acids, which I should not like the responsibility of recommending. Without these the "processing" takes several hours and thicker cans are required than for tomatoes and fruits, to prevent them bursting. If any one knows a practicable method for the ordinary housekeeper it will be a kindness to give it to the Home Department. CERES.

Pickles.

Pickles are far better home made. The prejudice existing against manufactured pickles has come to be universal, and not without reason. Yet even home made varieties are not without objections, particularly those in which alum has been used to green them. Too much care cannot be exercised

in the use of brass kettles, or tin or copper receptacles in the making of pickles. A beautiful green color is imparted to the pickles, so also is a poisonous substance, ruinous to the health of those who consume them.

Pickles cannot be boiled long without becoming soft and unfit for use. They are usually sufficiently cooked enough by pouring boiling vinegar over them, although sweet pickles will bear more heating than this, and receive no harm.

Small cucumbers are the best for pickles. Mixed pickles, picalilli, Chutney chow chow, and others of a like fiery nature, ought to be eaten with the greatest moderation, if at all.

Pickles ought to be kept covered with vinegar, and, if at any time they begin to grow mouldy, boil up the vinegar and add spice to them.

Sweet flag, horse radish root, and mustard, are all good preservatives of pickle, and can be added to the jars at any time during the season, whenever the vinegar is scalded.—*Er.*

Care of Kitchen Floors.

I paint my kitchen floor each spring, and occasionally in the fall. I apply two coats as follows: In the first place we keep on hand a can of boiled linseed oil, a can of Japan, and a bottle of spirits of turpentine. I prefer the boiled oil, as it dries better, and also gives the paint a gloss that is not attained in the use of raw oil. I take two quarts of this oil, a pint of Japan, and one-half teacupful of spirits of turpentine, and stir in three or four pounds of French yellow ochre, making it just thick enough to spread with a brush. A sixty-cent brush is good enough. After the work is done in the afternoon, the floor is mopped with weak soap suds, in which is put a trifle of washing soda. After it dries for half an hour or so it is ready for the paint. The first coat is then spread on, and in the morning it will be quite hard. But I have a few strips of boards laid down, so as not to walk on it too much, and the children must be kept out for three or four days. The second afternoon another coat is spread on in like manner, and in less than a week the paint will be firmly set. Sometimes I have added a pound or two of white lead, but I have not been able to see much, if any, advantage in it. One year I used all white lead, and made it a dark slate color by adding a little lamp black, but the floor never looked clean, and had a dingy appearance.

Painting the floor saves a large amount of work, for then if you spill grease on it, all you have to do is to wash it off with warm, weak soap suds, when it will look clean and neat. In case one does not use carpet on the dining room floor, it should be painted in the same manner. A kitchen floor kept well painted will last at least twenty years, if not more, while the same floor would not survive more than half a dozen under the ordinary scrubbing process.

With a floor thus painted, and the house grained and varnished, the labor of keeping it clean is but a trifle compared to the old plan of an unpainted kitchen.

Domestic Recipes.

CHOW-CHOW.—Two heads of cabbage, and if to be had two of cauliflower, one dozen cucumbers, six bunches of celery, six peppers, one quart of small white onions, two quarts green tomatoes. Cut into small pieces, and boil each vegetable separately until tender, and then strain them from the water. Two gallons of vinegar, one-fourth pound of mustard, the same of mustard seed, one pot of French mustard, one ounce of clover, two ounces of tumeric. Put all with the vinegar into a kettle, season with salt, and let come to a good boil. Mix the vegetables, and stir them well into the boiling dressing for a moment. Fill up the jars, adding now and then red and green peppers.

Cover the vegetables well with the dressing and make air-tight.

STUFFED ROAST VEAL.—A bit of the tenderloin; have the butcher to gash it in several places. Pour some boiling water over half of a small loaf of bread, work it up with the hand, and mix with it cold rice, hominy or Irish potatoes, either or all, if you have them, an onion, a little parsley and a small piece of red pepper finely minced. Into a hot skillet, drop a table spoon of butter, turn the mixture into the boiling butter, season with salt and stir until it gets a little stiff, when break into it one or two eggs, stir again thoroughly, turn out into a tray, stuff the gashed veal with it, salt, lard and flour it, lay in a pan, cover with thin strips of breakfast bacon, add a pint of water and roast, basting frequently until done. There will be some of the dressing left; just before taking roast from oven, make this into little loaves, sift with flour, pour out most of the gravy and place them around the roast; in a few moments they will brown, when serve placed around the roast, pouring the gravy over all. Good hot, better cold.

Lay a Fainting Person Down.

It is surprising how everybody rushes at a fainting person, and strives to raise him up, and especially to keep his head erect. There must be an instinctive apprehension that if a person seized with a fainting or other fit fall into the recumbent position, death is more imminent. I must have driven a mile to-day while a lady fainting was held upright. I found her pulseless, white, and apparently dying, and I believe that if I had delayed ten minutes longer she would really have died. I laid her head down on a lower level than her body, and immediately color returned to her lips and cheeks and she became conscious. To the excited group of friends I said: Always remember this fact, namely, fainting is caused by a want of blood in the brain; the heart ceases to act with sufficient force to send the usual amount of blood to the brain, and hence the person loses consciousness because the function of the brain ceases. Restore the blood to the brain, and instantly the person recovers. Now, though the blood is propelled to all parts of the body by the action of the heart, yet it is still under the influence of the laws of gravitation. In the erect position the blood ascends to the head against gravitation, and the supply to the brain is diminished, as compared with the recumbent position, the heart's pulsation being equal. If then, you place a person sitting whose heart has nearly ceased to beat, his brain will fail to receive blood, while if you lay him down, with the head lower than the heart, blood will run into the brain by the mere force of gravity: and in fainting, in sufficient quantity to restore consciousness. Indeed, nature teaches us how to manage the fainting persons, for they always fall, and frequently are at once restored by the recumbent position into which they are thrown.—*Er.*

AGRICULTURE IN THE SOUTH.

Its Needs and Opportunities.

By TH. POLLARD,
Ex-Commissioner of Agriculture of Virginia.

ROTATION OF CROPS.

We were speaking in our last of the improvement of our lands by proper cultivation, particularly by deep and thorough plowing, to produce friability of soil, to admit heat, air, light, and moisture to plants, enabling them to strike their roots deep into the soil, and eliminate from thence their mineral constituents. We come now to speak of proper rotations of crops as a means of improvement, or if not of improvement, as a prevention of deterioration, for we know that much land in Virginia has been worn down by continued cropping, and the cultivation of the same crops, or those requiring the same constituents for their growth, year after year, on the same land. We hear the expression from practical observers of land being "clover sick" or "wheat sick," which is witnessed as the result of this system.

The Genesee country in New York, famous for its wheat production, was cultivated so long, and frequently in wheat, that it became "wheat sick," the production falling off from 20 to 25 bushels to the acre down to 8 or 10. By proper rotation, and the use of phosphate of lime, it is said to have been restored to near, or quite, its former production. Nature sets us an example in this respect. If we cut down, and remove from forest land its growth, no attempt is made to reproduce the same kind of tree, but another at once puts up to occupy its place, oak being followed by pine, and pine in its turn by something else. We do not propose to go into a precise enumeration of what crops should follow one another, but state the general proposition that crops that remove from the soil the same constituents, or elements of plant food should not, as a general rule, succeed one another; and for this reason, the same crops should not follow one another. So crops requiring different elements of nutrition should be cultivated one after another. Corn, for instance, requires less ammonia than wheat, but a larger amount of potash and phosphoric acid, the potash and ammonia being much the same, as for tobacco, a reason why tobacco should not follow corn, and *vice versa*. Wheat requires much less potash than tobacco, and more phosphoric acid, and more ammonia. So we see why it is better for wheat to follow tobacco, than for corn and tobacco to succeed one another. So of other crops and vegetables—let those succeed one another whose requirements are different, and avoid the succession of those which remove the like materials from the soil. Almost any crop may succeed clover and sod lands. By permitting any land to remain in sod as long as it is profitable for hay or pasturage is sure to improve it, and as formerly said, the grasses play an important part in any rotation, and no country is on the road to improvement which is devoid of grass.

There are a few crops which do not seem to follow this general law above alluded to, of the necessity of rotation, but we apprehend they are crops which obtain a good deal from the atmosphere, principally ammonia. Sweet potatoes, peas, and for a long time clover, are instances of this. Corn fodder does not seem to exhaust land at all, and some who have tried it say it may be raised on the same soil for many years with rather an improvement, than a deterioration. This may be explained by its not being permitted to form any grain, by its fully shading the land, and its leaving a large mass of roots to decay in the soil, and it may be that corn feeds on the atmosphere, abstracting ammonia as some contend. On the other hand, there are some plants and vegetables which seem to succeed themselves very indifferently, as cabbage and Irish potatoes, which in a few years take on disease if kept on the same land. We had supposed melons, as they are heavily manured in the hills, would bear frequent repetition in the same locality, if the place of the hill was annually changed, but it seems that this is not so, and that they require rotation annually.

There have been discussions about the different fields system—some advocating three field, some four, some five, six, &c., but if the general principles we have laid down are observed, it is unnecessary to discuss these systems, except to observe the more "shifts" there are, the better it will prove for the land. If no rotation is observed, then heavy manuring must be practiced, such as is adopted by the "truckers" and cultivators of small farms near the cities.

DRAINAGE.

This is another important method of improving our lands, and which is much neglected in Virginia and other States. Where our farmers do resort to it, it never enters their thoughts to drain any but marshy and very wet lands, and when told

that the farmers of Great Britain very often locate drains forty feet apart all over their farms whether apparently wet or not, they scarcely credit it. The venerable John Johnson, of Scotland, well known as a most successful farmer located on a farm near Seneca Lake, New York, of very moderate productive capacity. He immediately set to work to drain it in every direction. His neighbors thought he must be beside himself, and one of them ventured to ask what he meant by this strange procedure. His reply was, "Verily the whole *airth* needs draining." Our farmers cannot at present, except one, now and then, afford to go into an extensive system of draining, but there is much of our land "cray-fishy," and other, that seriously needs draining to let off the surplus water, which poisons the lands, stunts the crops and gives growth to nothing but the coarsest grasses. Draining acts in a variety of ways. On ordinary land not called wet, its action is similar to the effect produced on the land near the new Richmond reservoir, formerly noticed, where a deep and wide ditch opened to admit the supply pipes, and filled in with the red clay subsoil after several months' exposure; the effect produced on the oats seeded was striking, and indeed, wonderful. This effect was due to the friability and depth of soil produced, which freely admitted heat, light, air and moisture. Few have any conception of the depth to which roots of plants penetrate. Some of them go as much as fifteen feet and perhaps more. Now the surface may be dry, but at the depth of a foot or more water may be found, and the roots of delicate plants will refuse to enter such soil, and are turned back to secure their nourishment near the surface, or the subsoil may be too hard for the delicate fibres to penetrate, or if penetrated, insufficient nourishment is obtained. Proper drainage carries the line of water below the point of injury to the roots, and prevents water ascending from springs, or by capillary action. It allows the rainfall, loaded with fertilizing gases, to pass through the soil, and after depositing these in the soil, to be discharged from below, in place of flooding the surface, and washing from the soil many substances useful to plant growth; and not only does every shower, where under drains exist, deposit the valuable ammonia and carbonic acid, but it forces the fresh air through the pores of the soil, producing conditions so important to plants. When the rain falls, it first displaces the air, either upwards or downwards, but when the rain ceases, the water as it sinks, leaves the pores of the upper soil open, and fresh air consequently follows. The opinion that land is exhausted because it does not produce good crops is in many cases fallacious. Only a small portion of its constituents is in a condition to furnish food for crops, the remainder being locked up as insoluble compounds, which are only rendered soluble, and available by the action of the air and water. The soil freed from the constant presence of water, gradually becomes loose, friable and sweet, and the deep roots of corn, clover, and other crops penetrate, obtaining mineral food, and also some ammonia, and when these decay, spaces are left for water and air. Coldness of soil is much influenced by the quantity of water it contains; remove this excess and the temperature is raised 8 or 10 degrees. The season is thus prolonged, and the maturity of the crop is hastened. Another effect of underdraining is that it aids the action of manures; on wet lands manures are almost thrown away, and there can be no high cultivation on land not naturally or artificially drained, and no permanent improvement of such land can be effected.

Drainage, then, is an important basis for the improvement of lands, and our farmers should fully comprehend its advantages, and the evils resulting from the want of it.

The American Farmer

"O FORTUNATUS NIMIUM SUA SI BONA MORINT
"AGRICOLAS." Virg.

PUBLISHED ON THE 1ST AND 15TH OF
EVERY MONTH,

By SAMUEL SANDS AND SON,

At No. 128 West Baltimore Street,

(Sign of the Golden Plow.)

BALTIMORE, MD.

WILLIAM B. SANDS, Proprietor.

SAMUEL SANDS, } Editors and Publishers.
WM. B. SANDS, }

Dr. THOMAS POLLARD, Associate Editor.

Richmond, Va., Office, 619 W. Main St.

SUBSCRIPTION:

\$1.50 a year, in advance. Clubs of five or more will be supplied at \$1 each.

ADVERTISING RATES:

	1 Time.	1 Mo.	2 Mo.	3 Mo.	6 Mo.	12 Mo.
1 Inch 12 lines	\$1.25	\$2.25	\$4.00	\$5.50	\$9.00	\$15.00

Liberal reductions will be made on larger advertisements. Advertisements to remain on outside page subject to special contract. Transient Advertisements payable in advance—all others quarterly. Advertisements should reach us by the 12th and 27th of the month, to secure insertion in the succeeding issue.

At the office of THE AMERICAN FARMER are located the offices of the following organizations, each of which its proprietor, Wm. B. Sands, is secretary:

Maryland Horticultural Society.

Maryland Dairymen's Association.

Maryland State Grange, P. of H.

Agricultural Society of Baltimore Co.

Also, of the Maryland Poultry Club, Thos. W. Hooper, Secretary.

BALTIMORE, AUGUST 15, 1883

The Farmer and its Form.

With this issue we complete two-thirds of the year of THE AMERICAN FARMER in its new series. Many of our friends have approved the change, but we find that some, and these include a number of our oldest subscribers, do not look upon it with favor. As our object is, of course, to meet the wishes of the greatest number of our readers, we shall be glad to have an expression of their views from such as may have occasion to write us, as to how they regard the change of form.

From a number of letters received we make the following extracts:

General R. Toombs, of Georgia: "I look upon its arrival with interest and pleasure."

J. Bowie Gray, Fredericksburg, Virginia: "I congratulate you on the marked improvement in THE FARMER."

W. T. Rumsey, Fairfax County, Virginia: "We are all pleased with the improvement in THE FARMER the present year and hope it may long continue prosperous."

J. D. Mosby & Bro., Virginia nurseries, Richmond, Virginia: "We renew our subscription to THE AMERICAN FARMER, a paper, permit us to say, we can hardly afford to be without."

A. P. Puett, Caldwell County, N. C.: The old FARMER is a welcome visitor and we can't do without it."

J. W. Stevenson, Statesville, N. C.: "Don't like the new form."

Dr. John R. Woods, Albemarle County, Virginia: "I hope you will give us your paper again in its original form, which I think far preferable to its present shape."

J. B. Diamond, Montgomery County, Md.: "We thought a great deal of your paper when in book form, but since enlarging and sending semi-monthly, we consider it the best farming (practical) paper out of half a dozen we take. My father commenced taking your paper with its first issue, I think; at any rate I have stacks of old AMERICAN FARMERS from which I often get useful information."

One of our most esteemed lady contributors writes: "I have discovered a want of satisfaction on the part of old subscribers with the change in the form of the paper. The chief complaint is that it is so easily destroyed or scattered, and therefore not useful for reference."

Postponement of the Baltimore County Fair.

The Agricultural Society of Baltimore County has determined to postpone its Fair, which was fixed for September 19th to 15th, to October 3d to 6th. This is on account of the selection of the former dates by the managers of the Oriole Celebration of this city for its festival, an event which draws great crowds of visitors to our city and which would interfere seriously with any other exhibition taking place at the same time. The time now chosen for the Timonium fair is also at a season more likely to afford cooler weather.

The exhibition promises to be a notable one for extent and variety, in the history of such displays in our State and ample preparations are being made for it. The farm stock will be shown in greater numbers, it is believed, than at any previous fair, and many visitors from abroad are expected.

The season of the year is one peculiarly fitted for Southern breeders to see and buy young stock. In Jerseys especially there will be so many grouped together that a wide range in taste may be gratified.

Although the Jerseys predominate in numbers in this vicinity all the other popular breeds have numerous representatives, and besides the older favorites the newer introductions, such as the Fresians and the Polled Scotch will also be on hand.

At the Timonium fair a Silver Cup will be offered for the best bull of any age of the beef breeds. This will bring into competition the Short-horns, Herefords, Polls and Devons, and ought to make an interesting and profitable feature of the show.

OBITUARY.

Death of Dickinson Gorsuch.

This public-spirited and much esteemed citizen of Baltimore county leaves, by his death, which occurred on August 2d, a vacancy which it will be difficult to fill. He was at once a most useful and active member of the community; an enterprising, sagacious and successful farmer; a sympathetic friend and neighbor; an enthusiastic Patron, and a good man.

No work for the promotion of Agriculture but had his ardent support. He was among the founders, probably the instigator, of the Gunpowder Farmers' Club; one of the originators of the Agricultural Society of Baltimore county; an early member of the Grange. As a practical farmer he was devoted to his calling, proficient in all its processes, directing them with judgment and skill which brought him profitable returns and the reputation of being one of the best agriculturists in this section. As a man he was modest and somewhat retiring of disposition, but wherever he was known he was appreciated and beloved for candor, sound judgment and kindly feelings.

The following testimonials bear witness to the sorrow his loss occasions:

At a meeting, August 14th, of the Board of Managers of the Agricultural Society of Baltimore county, the following was adopted:

Resolved, That this Board has learned with sorrow of the death of Dickinson Gorsuch, long one of its members, and one of the most active and earnest promoters of the objects of our Society, and that as a mark of our deep regret at the loss which the agricultural interests of Baltimore county have sustained, that this resolution be communicated to his family, spread on our minutes, and published in the papers of the county and THE AMERICAN FARMER.

At a meeting held by Centennial Grange, at its hall on August 3d, a committee was appointed to draft suitable resolutions for the loss Patrons of Husbandry have sustained by the death of brother Dickinson Gorsuch, master of Glencoe Grange. The committee reported the following preamble and resolutions:

and Liver Cure, however, restored me to perfect health. GARE S. BOOKER. *

BALTIMORE COUNTY FAIR.**POSTPONEMENT!**

On account of the selection by the Oriole Festival of Baltimore of the dates fixed for the Fair, the Managers have determined to change the time of holding the latter from September 13 to 15, to

OCTOBER 3, 4, 5 and 6,

When the original programme will be carried out. A magnificent display of Stock, Farm and Garden Products, Manufactures, etc., is expected. Competition is open to all comers, and the agriculturists, stock raisers and gardeners of sister counties are invited to be present and exhibit. For Premium Lists and information address the Secretary,

WM. B. SANDS,

AMERICAN FARMER OFFICE, 128 Baltimore Street, Baltimore.

LANDRETH'S PEDIGREE SEEDS

SEEDS For the **MERCHANT** on our New Plan
SEEDS For the **MARKET GARDENER**
SEEDS For the **PRIVATE FAMILY**
SEEDS Crown by ourselves on our own Farms

Handsome Illustrated Catalogue and Rural Register FREE TO ALL.
MERCHANTS, SEND US YOUR BUSINESS CARDS FOR TRADE LIST.

DAVID LANDRETH & SONS, SEED GROWERS, PHILADELPHIA

FOR FALL PLANTING

Fruit & Ornamental TREES, SHRUBS, ROSES, &c.

The largest and most complete general stock in the U. S., including many Choice Novelties. Abridged Catalogue mailed Free to all applicants. Address,

ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y.

EPISCOPAL FEMALE INSTITUTE, WINCHESTER, VA.

Rev. J. C. Wheat, D. D., Principal. This is a chartered institute of the highest grade, with a full corps of well qualified teachers. Special facilities are afforded for the study of music, the modern languages, &c. The terms are moderate compared with the advantages enjoyed. The location in the "Great Valley of Virginia" is noted for healthfulness. The 9th annual session begins Sept. 13, 1882. For circulars address the Principal. References: the Bishop and Clergy of Virginia, West Virginia and Maryland.

FORMAN WHEAT!

I have for sale a new variety of wheat, grown in Talbot and Queen Anne's counties. The yield has never been less than 18 bushels and has been as high as 44 for one seeded. Its virtue lies in the strength of the straw and size of the heads, some of which contain as many as 55 grains. Having a limited quantity for sale, I would be pleased to give further information to any one wishing to try what is considered an unusually productive wheat. Price at my barn \$3.00 per bushel. Samples may be seen at the office of THE AMERICAN FARMER.

RICHARD C. FORMAN,
Wye Mills, Talbot County, Md.

SOUTH DOWNS!

RAMS AND EWES bred from importations from Henry Webb and Lord Walsingham's flock at Merton. For sale by

SAM'L J. SHARPLESS,
705 Walnut Street, Philadelphia.

University of the State of New York
AMERICAN VETERINARY COLLEGE,
141 45th STREET, N. Y.

THE Eighth Winter Session of this Institution will open October 30, 1882. Catalogues and announcements can be had from the Dean of the Faculty,
A. LAUTARD, M. D., V. S.

Annual Stock Sales-Balance.

THE SUBSCRIBER HAS YET FOR SALE:
Jersey Heifer "FANNIE OF RHODE RIVER," No. 12540; solid color, black point, 21 months old. Price, \$200.
Jersey Heifer "PRIDE OF RHODE RIVER," No. 12522; solid color, black points, 14 months old. Price, \$100.
Jersey Calf "ALDERNEY MAID 21," white and fawn, 6 months old. Price, \$60.

Bay Horse "PAUL," 4 years old, very fast and showy. Price, \$300.
Bay Filly "ALICE," fast stepper, very kind and gentle, suitable for a lady. Price, \$150. 4 years old.
Bay Mare "FANNIE," 9 years old. Price, \$100.
Bay Horse "BILL," 10 years old. Price, \$75.
Black Mare "ANNIE," 9 years old—and Colt. Price, \$150.

The above Horses are sound and true, and will work anywhere, single or double, or under the saddle; and all of the above stock are but to be seen to be appreciated.

F. B. STEINER,

Rhode River P. O., A. A. Co., Md.

ESTABLISHED

A. E. WARNER,

MANUFACTURER OF

SILVER WARE AND RICH JEWELRY

English, Swiss and American WATCHES of the Best Makers,

Importer and Dealer in Diamonds, Fine Watches, Silver-Plated Ware, Table Cutlery, &c.

WEDDING PRESENTS.

Premiums for Agricultural Fairs, Fine Bronzes, Opera Glasses, Shell Jewelry, &c.

All of which is offered at GREATLY REDUCED PRICES.

No. 135 W. BALTIMORE STREET, near Calvert, Balto.

ESTABLISHED 1839.

PURE BONE DUST AND DISSOLVED PURE RAW BONE

MANUFACTURED AND FOR SALE BY

JOHN BULLOCK & SON,

No. 71 SMITH'S WHARF, BALTIMORE, MD.

ALSO AGENTS FOR

F. O. NORTON'S ROSENDALE and BRIDGE'S & HENDERSON'S ROUND TOP CEMENTS.

THE IMPROVED ARTESIAN WELL COMPANY OF BALTIMORE

ARE prepared to contract for a supply of pure water from strata beyond all surface drainage. Also to supply water for Dwellings, Barns and Stock Yards. Our new process of digging brings the price of artesian wells within the cost of a common open well. Address above,

47 Lexington Street, Baltimore.

WANTED 50,000 FARMERS, to send for the Illustrated Circular of our Adjustable Folding Iron Harrow. Low price for introducing. Low freight. Harrow cuts 5, 7, 9, 10 and 12 feet wide at pleasure. Does fine or coarse work. Can't be beat for cultivating Corn, Potatoes, Tobacco, Cotton, etc., as the frame does not run on the rows. The only successful harrow for Eastern Farmers. Fully warranted.

ROMKEY BROS.,

Burlington, Iowa.

TURNIP SEED!

True American Purple Top and White Flat Dutch, White and Yellow Rutta Bags, and all approved varieties, sent by mail, postpaid, 60c. By express or freight in 50 packages, 50c. Liberal discount to trade. C. S. ROGERS, Seedman, 133 Market St., Phila.

MAN chester Strawberry Plants, 10c. doz. \$4 per 100. Valuable information in free catalogue. Address F. I. SAGE & SON, Wethersfield Conn.

FOR SALE.

COTSWOLDS.—RAM AND EWE LAMBS, by imported "Earl of Warwick," out of ewes shearing 14 lbs. this season. Price reasonable. Address,

J. B. GRAY,

Fredericksburg, Va.

INTERNATIONAL EXHIBITION —OF— Animals Connected with Agriculture, AT HAMBURG, 1883.

In consequence of the many suggestions which have been put forward, the Undersigned have combined for the holding at Hamburg, in 1883, of an International Exhibition of Animals connected with Agriculture.

Looking backwards to the acknowledged benefits to the farming interests, which resulted from the first international Agricultural Exhibition, which was held here in 1863, and which was also the first of its kind held in Germany, the Undersigned are strongly of opinion that a repetition of the undertaking, after a lapse of 20 years, will be productive of similar service to the Agricultural World, especially as the opportunity of international comparison as well as competition will be offered thereby, through the extensive progress which has been made in Cattle Breeding during the last two decades.

Parties interested in this matter in all countries, are therefore cordially invited both to take part in and to visit this Exhibition, which will be held in July, 1883, and will comprise the following departments, each of which is presided over by Special Committees:

1. Horse breeding, including Mules and Asses.
2. Cattle breeding.
3. Sheep breeding.
4. Pig breeding.
5. Bee culture.
6. Pisci-culture.
7. Poultry culture.
8. Stables, Tools, etc., for the different branches of cattle breeding.
9. Scientific aids to the above.

The general programme of the Exhibition, as well as those of the separate departments, may be procured, free of charge, after the 15th of June, 1883, from the Secretary of the Exhibition Committee, **Dr. Richard Seelemann.**

Hamburg, May, 1882.

THE COMMITTEE OF THE International Exhibition of Animals connected with Agriculture, AT HAMBURG, 1883.

Patronage.

Burgermeister Dr. Kirchenpauer,
Hamburg.

Staatsminister Dr. Lucius,
Berlin.

Board of Directors.

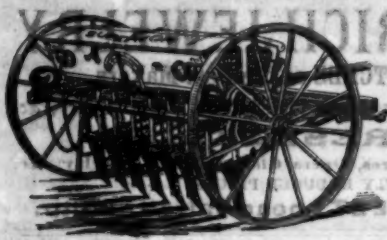
Albertus von Ohlendorff,
1st President.

Syndicus Dr. Leo,
2d President.

General-Consul Nalting,
Treasurer.

Dr. R. Seelemann,
Secretary.

THE SUPERIOR GRAIN DRILL.



THE SIMPLEST, STRONGEST

—AND—
MOST DURABLE DRILL in the Market.

IT DEFIES COMPETITION.

NO CHANGE OF COG-WHEELS,
NO BUNCHING of the GRAIN.

The SUPERIOR is the only Drill having a
RIGIDLY FIXED, CONTINUOUS, WROUGHT IRON AXLE.
THE FERTILIZER ATTACHMENT

is no NEW EXPERIMENT, but has stood the severest tests for years.

—AND OUR—
GRASS SEEDER
is a POSITIVE FORCE-FEED, the same as our Grain-Feed.

WE ALSO ARE AGENTS FOR THE

IMPROVED BUCKEYE CIDER MILL.

This Mill will Produce more Cider from the same Quantity
of Apples than any other Mill.

IT IS VERY STRONG AND DURABLE AND RUNS EASILY.

AGENTS WANTED IN ALL UNOCCUPIED TERRITORY.

Send for Circular and Price List to



J. C. DURBOROW & CO.,
35 LIGHT STREET, BALTIMORE.



PHILADELPHIA MUSICAL JOURNAL. 1300 CHESTNUT STREET.

WE NOW OFFER FOR SALE,
No. 1 PERUVIAN GUANO,
OF RECENT IMPORTATION FROM THE
LOBOS DEPOSITS.
So Famous for the large per centage of

BONE PHOSPHATE of LIME and POTASH

The cargos offered contains about 5% to 6 per cent. of Ammonia. 48 per cent. Bone Phosphate of Lime.
4 per cent. Potash, K. O.

THE Guano has not been ground, or in any manner manipulated. If farmers will compare the above ingredients with the cheapest fertilizers offered for sale, we think they will pronounce Peruvian Guano the cheapest fertilizer (in the strict sense of the word) in the market. It being natural guano, the cost of manipulation, borne by manufactured articles, is saved.

VOSS BROS., 50 S. Gay St., Baltimore, Md.

FARM WAGONS

FOR SALE BY

THOS. NORRIS & SON,

Manufacturers and Dealers in
Agricultural Implements, Machinery, Seed, &c.
60 LIGHT STREET, BALTIMORE.

PRATT'S ASTRAL OIL BERKSHIRES FOR SALE

WILL NOT EXPLODE.

Wholesale and Retail.

LAMPS OF EVERY DESCRIPTION.

For Sale by **W. & H. SPILCKER,**

Agents for Ches. Pratt & Co.,
New York.

163 Baltimore St.

At Reasonable Prices.

I BREED only from the most choice stock of the country, in pedigree, form and markings. All stock recorded, and can be seen at any time. Also, Black-Breasted, Red-Breasted, and Blue GAME CHICKENS, or eggs of superior stock for sale. Stock shipped as represented. Correspondence solicited.

THOS. A. HAYS, Churchville, Md.

THOROUGHbred SHEEP.

COTSWOLDS.

Having purchased the First Choice Bucks, Ewes and Lambs of the well-known flock of the late P. B. Jones, Sr., of Rapidan, Va., and the entire flock of Mr. A. S. Jones, we are now offering them all for sale WITHOUT RESERVE, in lots to suit purchasers, at remarkably low prices, quality considered.

MERINOS.

We are also offering a choice flock of Am. Merinos (Spanish extraction) consisting of one, two, three and four-year-old bucks and ewes, and this spring Lambs. PRICES VERY LOW.

SHROPSHIRE DOWNS.

A few very choice buck lambs for sale, by our imported bucks. PRICE \$20 EACH.

WM. L. BRADBURY & CO.

Nelson, Orange County, Va.

STRAWBERRY PLANTS,

BY the 100 or 100,000. Have a large and pure stock of all the leading standard varieties, and many of the newer sorts. Sharpless, Miner's Great Prolifer, Mt. Vernon, Cumb. Triumph, 75c. per C.; \$5 per M. Crescent Seedling, Monarch, Kentucky, Duncan, Wilson, Chas. Downing, 40c. per C.; \$2.25 per M. Also,

RASPBERRY PLANTS.

Gregg, \$15 per M.; Cuthbert, \$11; Brandywine, \$9.

R. S. COLE,

Cedar Hill Fruit Farm,

Harman's, A. A. Co., Md.

JOS. STELWAGON'S SONS,

Manufacturers of
Manilla, Roofing, Sheathing and Carpet-Lining

PAPERS,

ALSO
ROOFING MATERIALS,

**525 COMMERCE STREET,
PHILADELPHIA.**

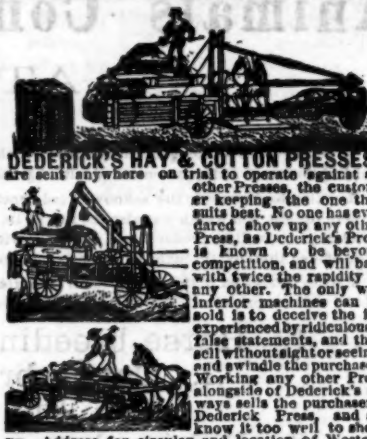
Imperial Wine Vinegar.

NONPAREIL CIDER VINEGAR.

STRICTLY pure and reliable. Many imitations. costing 3 cents a gallon, are sold as Cider Vinegar. To guard against deception, observe that packages bear our brands.

Fresh APOLINARIS WATER.

FREDK. M. BOLLMAN, Importer
63 S GAY STREET.



DERICK'S HAY & COTTON PRESSES

are sent anywhere on trial to operate against all other Presses, the custom of keeping the one that suits best. No one has ever dared show up any other Press, as Derick's Press is known to be beyond competition, and will bale with twice the rapidity of any other. The only way inferior machines can be sold is to deceive the inexperienced by ridiculous false statements, and thus sell without thought of the purchaser. Working any other Press alongside of Derick's always sells the purchaser a Derick Press, and all know it too well to show up. Address for circular and location of Western and Southern stores and Agents.

P. K. DEDERICK & CO., Albany, N.Y.

HUMPHREYS' HOMEOPATHIC VETERINARY SPECIFICS

FOR THE CURE OF ALL DISEASES OF
Horses, Cattle, Sheep, Dogs, Hogs & Poultry.
For Twenty Years Humphreys' Veterinary Specifics have been used by Farmers, Stock-breeders, Horse R.R. Travelers & Hippodrome Managers and others with perfect success.

LIST OF SPECIFICS.
A. A. Cures Fevers and Inflammation, Milk Fever, Spinal Meningitis, Hog Cholera, 75c.
B. B. Cures Founder, Spavin, Stiffness, 75c.
C. C. Cures Distemper, Nasal Discharges, 75c.
D. D. Cures Bots or Grubs, Worms, 75c.
E. E. Cures Cough, Heaves, Pneumonia, 75c.
F. F. Cures Colic or Gripes, Bellyache, 75c.
G. G. Prevents Abortion, 75c.
H. H. Cures all Urinary Diseases, 75c.
I. I. Cures Eruptive Diseases, Mange, &c. 75c.
J. J. Cures all Diseases of Digestion, 75c.
Veterinary Case (black walnut) with Veterinary Manual, (30 pp.), 10 bottles of Medicine, and Mediator, \$8.00
Mediator, 35c.

These Veterinary Cases are sent free to any address on receipt of the price, or any order for Veterinary Medicine to the amount of \$5 or more. Humphreys' Veterinary Manual (30 pp.) sent free by mail on receipt of price, 50 cents.

Pamphlets sent free on application.
HUMPHREYS' HOMEOPATHIC MED. CO.
109 Fulton Street, New York.

STRAWBERRIES.

Newest and Best Varieties.
Grown in Pots and ready for shipment after July 25th. It planted early will give a good crop next season. New descriptive priced catalogue containing full cultural directions mailed free.
Address, **ELLWANGER & BARRY,**
Rochester, N. Y.

G. W. LEHMANN, Ph. D. **W. MAGER,**
Chemist and Metallurgist. Formerly Chemist of U. S. Patent Office.
Sales, Copper Works. Fertilizer Central Station.

CHEMISTS AND ASSAYERS,

57 S. GAY ST., BALTIMORE, MD.
ANALYSES of all descriptions—Manures, Soils, Chemical Fertilizers, Ores of Gold and Silver (by fire process), Copper, Lead, Manganese, etc. Clay, Coal, Limestone and other minerals. Water for steam, manufacturing and household use. Mineral waters and various products of art. Terms moderate.

FOR SALE.

CHOICE BERKSHIRE PIGS, price \$13.50 per pair. Boxed and delivered free.

THOMAS J. LEA,
Brighton P. O., Md.

WANTED

By a graduate and A. M. of Princeton, with several years' successful experience, a position as teacher in a public or private school. Address, stating terms, etc., **ALBERT E. ACWORTH,**

Russum, Md.



HIVES, SECTIONS, FEEDERS & C.

BALTIMORE

SUNNY SIDE APIARY

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

Parker's Hair Balsam is finely perfumed and is warranted to prevent falling of the hair and to remove dandruff and itching. Hirscox & Co., N.Y.

50c. and \$1 size, at dealers in drugs and medicines.

RESTORES the Youthful Color to Grey or Faded Hair

TO WHEAT GROWERS.

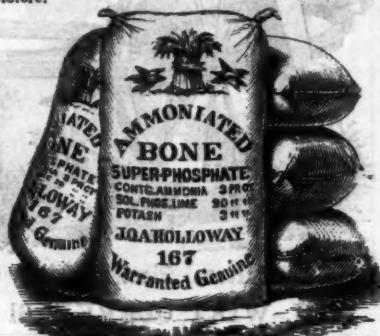
The undersigned PIONEER, in the manufacture of Fertilizers in this city and Originator in 1858 of the formula and processes of manufacture of

"EXCELSIOR" and "AMMONIATED PHOSPHATE"

So well and favorably known by the Agricultural public, relying upon his experience and personal reputation hitherto acquired in the uniform excellence of these Fertilizers as MANUFACTURED BY HIM, continues to offer them to the Farmers and Planters of Maryland and Virginia, with the assurance that the high standard quality of each will be maintained as heretofore.



AND



The above are the most concentrated FERTILIZERS ever offered the Farmer—combining all the stimulating qualities of Peruvian Guano, and the ever-durable fertilizing properties of Bones, in fine, dry powder, prepared expressly for drilling. It is the universal opinion of the Farmers of Maryland and Virginia, after over twenty years experience in the use of the Excelsior manufactured by me, that an application of 100 pounds is equal in its effects to 200 pounds of any other Fertilizer or Guano, therefore fully 50 per cent. cheaper.

With my present advantages and superior facilities for Manufacturing I challenge competition with any Fertilizer sold in the United States in QUALITY, MECHANICAL CONDITION and PRICE.

By strictly adhering to my Original Formulas, using only the most concentrated materials, and superintending in person the manufacture—as for the past twenty-four years.

UNIFORMITY OF QUALITY IS GUARANTEED.

Farmers to secure the ONLY GENUINE EXCELSIOR and PHOSPHATE, prepared according to my original Formulas established in 1858, should see that every Bag is branded as above, with the ANALYSIS and MY NAME IN RED LETTERS.

J. Q. A. HOLLOWAY,

ORIGINATOR AND MANUFACTURER,

107 McELDEREYS WHARF, Baltimore, Md.

TO FARMERS & STOCK OWNERS



THE
ATTENTION
OF

FARMERS,
STOCK OWNERS

DAIRYMEN
AND
POULTRY
KEEPERS

is called to the
SPECIALTIES
made by

The Retiker Manufacturing Co.

1. The Indian Condition Powder.—Unlike many powders now on the market, which act on y as a stimulant, these powders, an entirely vegetable compound, possess the qualities of a tonic—involving and developing the natural powers of animals, and being a mild purgative, keep the system in a healthy condition, enabling the animal to do more work and to resist the approach of disease. To dairymen these powders are invaluable, largely increasing the yield of milk, enriching the cream and adding greatly to its butter-yielding properties. When used on dairy farms it has everywhere given most complete satisfaction.

2. The Indian Ointment.—For the cure of cuts, sores, and all skin diseases on man or beast. The healing properties of this ointment when applied to sores of the longest standing are perfectly marvelous, allaying the inflammation at once and working a cure after a few applications.

3. The Retiker Chicken Food.—For prevention and cure of all diseases incident to poultry yards. Poultry keepers find, after brief trial, a very large increase in the production of eggs, and marked improvement in the weight and appearance of fowls. As a promoter of growth in young fowls it has no equal, keeping them in health and free from vermin.

4. The Shepherd's Lotion.—A chemical preparation for prevention and cure of scab, rot, &c., in sheep and swine. This preparation needs only a trial to prove its worth.

One-pound box samples of the Condition Powders or Chicken Food, or a sample box of the Ointment, will be forwarded to any address, post paid, on receipt of 25 cts. in stamps or currency. Address for samples or circulars, The Retiker Manufacturing Co., 1701 Wylie Street, Philadelphia, Pa.

REGISTERED SHORTHORN BULL FOR SALE.

DUKE OF HAMILTON No. 35111, Vol. 19, A. 2.
H. H. B. A sure breeder, kind and gentle, will be sold low, as his owner has no further use for him.

THOS. J. LEA,

Brighton P. O., Montgomery Co., Md.

Cotswold Sheep for Sale.

40 RAM and EWE LAMS, sired by "Royal Sherborn" and other fine rams; also, Yearling Rams and Ewes of all ages. Imported "Baron Thame" of 23½ lbs. fleece at the head of my flock—whole flock as Yearlings average 14 to 20 lb. fleeces.

ED. C. LEGG,

Kent Island, Md.

Virginia Lands.

Upper James Real Estate Agency,

By WILLIAM HOLMAN,

CARTERSVILLE, Va.,

WHO offers for sale upwards of 12,000 acres of land lying in one of the most desirable regions of Eastern Virginia. Catalogues sent on application.



The richest, creamy BEER ever brewed. Purifies the blood. CURES Dyspepsia, Liver and Kidney diseases. Sent by Mail on receipt of 25 cts. in postage stamps.

Address: BEAN & RARE, Wholesale Druggists, Nos. 47 & 49 N. 2d St., Philadelphia.

A. G. MOTT,

AGRICULTURAL IMPLEMENT
And Seed Warehouse,

40 Ensor St., Near Belair Market, Baltimore

SOLE AGENT for the great BELLE CITY FEED CUTTER, "Boss of the World" for Fodder, Hay and Straw. Cuts 4 lengths, from ¼ to 3 inches. Will cut one ton in 30 minutes. SEND FOR CIRCULAR.

MAKE HENS LAY.

An English Veterinary surgeon and Chemist, now traveling in this country, says that most of the Hens and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. J. S. JOHNSON & CO., Boston, Mass., formerly Bangor Me.



For Dyspepsia, Nervousness, Bilious Attacks, Headache, Constipation, and all Diseases of the Liver and Stomach. ARE DECIDEDLY THE MOST POTENT REMEDY THAT CAN BE USED.

It is not an intoxicating beverage, and certainly would never be used as a pleasant substitute for alcoholic stimulants, but it is truly a valuable Family Medicine, which has been used for many years by large numbers of our citizens with the most unflinching success in all the above complaints. Try it.

25 Cents a Paper, or \$1.00 a Bottle.
W. M. E. THORNTON, Proprietor,
Baltimore, Maryland.



LANDRETH'S BLOOMSBURY SWEET OR RUTA BAGA

Is the result of critical selection, and has PROVED to be, unquestionably, the most desirable of all known strains of

PURPLE TOP YELLOW RUTA BAGA.

The foliage is not superabundant, the shape is nearly globular, the crown deep purple, and the flesh is rich yellow. Also,

Amber or Yellow Globe Turnip.
Aberdeen or Scotch Yellow Turnip.
Pomereau White Globe Turnip.
Purple-top White Ruta Baga Turnip.
Strap-leaved Garden Turnip.
Hanover or Long White French do.
Yellowstone Turnip.

Early White Flat Dutch Turnip.
Red or Purple-top Flat Turnip.
Crown Turnip.
Early White Egg Turnip.
Large Early Red-top Globe Turnip.
White Norfolk Turnip.
Seven-top or Forrester Turnip.

Every Farmer should sow Turnip Seed. A good stock of turnips is the best, and most economical feed for cattle during the winter and early spring months. Also, turnips grown on the ground and plowed in make a very valuable manure. Illustrative and Descriptive Catalogues free on application.

DAVID LANDRETH & SONS,

PHILADELPHIA, PA.



ARAWANA BUTTERCUP, 6052.

Windsor Herd JERSEYS.

WATTS & SETH

28 ST. PAUL STREET,

BALTIMORE, MD.

MANUFACTURES

The Popplein Silicated Phosphate Co.

Of Baltimore, Md.

THE Popplein Silicated Phosphate.

Forming a complete Mineral Manure, and proved by the experience of the past five years to be specially adapted to light, loamy lands, or those containing vegetable matter.

ANALYSIS.

Moisture, at 212° F.....	5 to 8 per cent.
Available Phos. Acid.....	9 to 11 "
Insoluble ".....	1 to 3 "
Soluble Silica.....	15 to 18 "
Potash K. O.....	2½ to 4 "
Magnesia.....	2 to 3 "
Soda.....	2 to 3 "

This Brand put up specially in Ten-pound Boxes, for use upon GRASS LAWNS and FLOWER BEDS. There is nothing to equal it.

Price, 50 Cents per Box.

THE POPPLEIN SILICATED PHOSPHATE CO.

128 WEST BALTIMORE STREET,

P. O. Box 852.

BALTIMORE.

ROSEBANK NURSERIES,

GOVANSTOWN, BALTIMORE COUNTY, MARYLAND.

Ornamental and Fruit Trees, Flowering Shrubs, Herbaceous Plants.

WE invite the attention of the public to our select stock of the following: STANDARD AND DWARF PEARS—2, 3 and 4 years. APPLES—Standard and Dwarf. CHERRIES—Standard and Dwarf. APRICOTS, CRAB APPLES, MULBERRIES, GRAPEVINES, of the most popular kinds, together with other small fruits. Our Collections of ORNAMENTAL TREES AND SHRUBS are large, and embrace most of the rarest sorts. BUSHES on their own roots, with the newest of BEDDING-OUT PLANTS by the dozen or 1,000, for which we have issued a separate Catalogue.

SPECIAL.—Sixty thousand one and two-year-old OSAGE ORANGE PLANTS, for hedges. CATALOGUES FORWARDED ON APPLICATION. ORDERS BY MAIL PROMPTLY ATTENDED TO. ALL GOODS DELIVERED IN BALTIMORE FREE OF CHARGE.

W. D. BRACKENRIDGE, Proprietor.

LUMBER.

THOMAS MATTHEWS & SON,
88 N. High St. and Cor. Canton Ave. and Albemarle St., Baltimore.

White Pine and Yellow Pine LUMBER, for Building.
Rough and Dressed Lumber.

HARDWOOD for WHEELWRIGHTS and CABINET-MAKERS.
SHINGLES, LATHS, PALES, Etc., AT LOWEST PRICES.

FALL 1882.

CLAIRMONT & FURLEY HALL NURSERIES.

FRUITS & ORNAMENTAL TREES, SHRUBS, &C.

200,000 Apple Trees, of all the old and new well-tested varieties, Standard and Dwarf Pears, Cherries, Plums, Peaches, Apricots, Damsons, Evergreens, Shade Trees and Shrubbery of the rarest sort. Asparagus Roots, Grape Vines, all leading varieties of Strawberries, Raspberries, Blackberries, &c.

To Dealers and those raising Fruit largely for Market, we will deal as liberally as any Nursery in the country. Address

WM. CORSE & SONS,

BOX 248, BALTIMORE P. O.

EASTERN SHORE NURSERIES,

DENTON, CAROLINE CO., MD.

FALL OF 1882.

PRICE LIST FOR FALL OF 1882 IS NOW READY, AND WILL BE MAILED FREE TO ALL APPLICANTS.

A very fine stock of APPLE TREES, of such kinds as are suited to the soil and climate of Maryland and Virginia. Peach Trees, Pear, Cherry, Apricot, Quince and Nectarine Trees. A large and superior lot of Wild Goose and other Plum Trees. An immense stock of Grape-Vines, embracing 40 kinds, at very low prices. Shade and Ornamental Trees. In short, a complete assortment of carefully grown nursery stock, at prices as low as a reliable and good article can be grown.

Send for Price List before purchasing elsewhere.

J. W. KERR, Proprietor.

The New GRAPES Prentiss,

Pocklington, Duchess, Lady Washington, Verano, Moore's Early, Brighton, Jefferson, etc. Price reduced. Also other small fruits and all other varieties of Grapes. LA ROBERT STOCK IN AMERICA.

GRIFFITH & TURNER, FARMERS & GARDENERS' SUPPLIES.

Have now ready for Seeding our Highly Concentrated Fertilizers, in fine condition for Drilling, to which we invite the attention of Farmers.

Griffith & Turner's Animal Bone Phosphate. Combines all the requisites of a complete fertilizer. Especially recommended for the wheat crop. Griffith & Turner's Ammoniated Phosphate. Griffith & Turner's Alkaline Plant Food. Has fully sustained its claims as a first-class, cheap phosphate. Griffith & Turner's Unsteamed Raw Bone. Slingluff's Dissolved Bone. Baker's Dissolved Bone. Holloway's Excelsior and Phosphate. Turner's Excelsior and Phosphate. Lister's and Whitlock's Phosphates. Peruvian and Orchilla Guanos.

Grain, Fertilizer, & Seed Drills.

THE HAGERSTOWN DRILL,

With New Force-Feed Seeder.

THE FARMER'S FRIEND DRILL,

With Cone Gear to Regulate Quantity.

THE MONARCH DRILL,

With Force-Feed Fertilizer Attachment. Sows Wet or Dry Fertilizers, and Seed either Back or Front of Hoes.

FEED CUTTERS.

DR. BAILEY'S ENSILAGE CUTTERS. THE CYCLE ENSILAGE CUTTERS. HAY, STRAW & FODDER CUTTERS. For Steam, Horse and Hand Power. THRESHERS, CLEANERS, STEAM ENGINES, HAY PRESSES, CIDER MILLS, CUCUMBER PUMPS, CREAMERS, CHURNS, BUTTER WORKERS, ETC.

OLIVER CHILLED PLOWS,

With Reversible Points. Repairing of all kinds done at short notice. Send for Circulars.

GRIFFITH & TURNER, 41 & 43 NORTH PACA STREET, BALTIMORE, MD.

\$72 a week. \$12 a day at home easily made. Costly outfit free. Address TRUE & CO., Augusta, Maine.

REGISTERED JERSEYS.

Chatsworth Farm, Reisterstown, Balto. Co., Md.

FOR SALE.

REGISTERED CALVES, tracing to such bulls as Lord Rex 1413, De Lancy 2234, and Watts 2010, the two first combining the blood of Albert, Splendid, McClellan and Pansy 8. The excellence of LORD REX, now at the head of my herd, is everywhere conceded. My herd took at the Baltimore County Fair of 1881 the Special Jersey Herd Prize of \$100, and five other First Prizes, the judges being John V. N. Willis, Esq., of New Jersey, and Colin Campbell, Esq., of Pennsylvania, and the conditions of competition unusually exacting.

ANDREW BANKS.

\$5 to \$20 per day at home. Samples worth \$5 free. Address STINSON & CO., Portland, Maine.

Peruvian Guano.



I have secured the only cargo of

HIGH GRADE PERUVIAN GUANO

in the United States direct from PABELLON DE PICA, the richest deposit of Peru, containing 13 per cent of Ammonia, also a full supply from LOBOS deposits, containing 5 1/2 to 6 per cent of Ammonia, which I offer for sale direct from ship or warehouse.

J. Q. A. HOLLOWAY, 107 McElderry's Wharf, BALTIMORE, MD.

\$66 a week in your own town. Terms and \$5 outfit free. Address H. HALLETT & CO., Portland, Maine.

FERTILIZER DISTRIBUTOR.

Suited for Fine (powder) Fertilizers, such as CARBONATE OF LIME, or for GROUND BONE PHOSPHATES, &c.



Send for Circular. Also for Treatise on Carbonate of Lime.

Now is the time to apply it, after first mowing and before fall plowing—or directly after sowing or with the seed.

SELENTIC CEMENT.

FOR

SILOS, CISTERNS, &c.

ROSENDALE, BOUND TOP

AND

Imported (Portland)

CEMENTS.

Agricultural Plaster, Kainit, Ground Bone and Peruvian Guano.

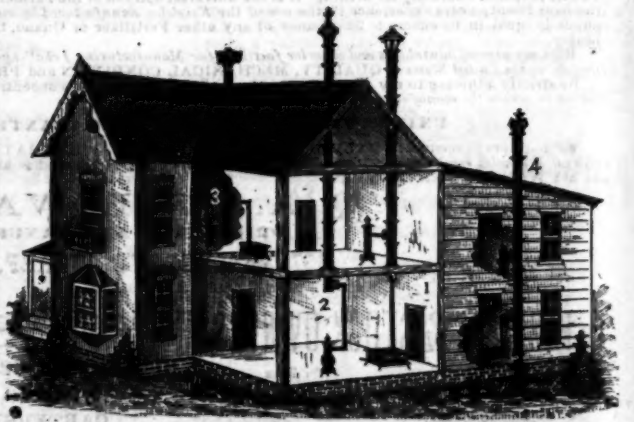
WM. WIRT CLARKE, 61 S. Gay Street, Baltimore, Md.

SAVE THE EXPENSE OF BUILDING A BRICK CHIMNEY.

Our Fire Clay Chimney Pipe does not rust or crack by heat or crumble from frost. It has been used 10 years for Dwellings, Schools, Churches, &c. No danger from fire, as it does not communicate heat to wood. Insurance Companies have decided it to be a safer Chimney than brick. It is equally as solid, and no bricks nor brick-layer are required—any one can put it up. Each section is two feet long and rests in the bowl of the next. We show four forms of construction. A complete chimney to use in two stories can be furnished for about \$5 00. Send for descriptive circular with full information.

Chas. H. Torsch & Co.

S. E. COR. PRATT AND CHARLES STREETS, BALTIMORE.



ASBESTOS

A GOOD FARMER must be Jack-of-all-trades, but the most important thing about a farm is to have the buildings well painted. And the art of painting is not in knowing how to spread it on (as this is soon learned), but the mixing is the important point, as great care should be used in the manipulation and selecting of oils, driers, pigments and minerals that enter into its composition. Now, all this is made easy by using the H. W. JOHNS ASBESTOS Paint, which is ready mixed for the brush. Made of pure oil, and has a body equal to two coats of white lead. Send for particulars, color sheet and reduced price list to

J. L. REED,

170 and 172 NORTH FOURTH STREET, PHILADELPHIA, DEALER IN ALL KINDS OF ASBESTOS MATERIALS.

GILPIN'S VEGETABLE LIVER PILLS

ARE prepared, with great care, from medical plants; are coated with sugar, that they may be taken by the smallest child and upon the most delicate stomach; are intended especially to act upon the Liver, thereby relieving all such diseases as COSTIVENESS, HEADACHE, PARALYSIS, DYSPEPSIA, COLDS, JAUNDICE, and all diseases of a bilious origin. No better evidence can be offered in favor of these Pills than the very fact that where their ingredients are known to family physicians, they are using them in their private practice. We append the following from one of our most prominent physicians: OAKLAND, June 28, 1880.—Dr. Gilpin: After carefully examining the formula of your Sugar-Coated Pills, I feel it but justice to say that the combination is certainly perfect, and comprises the only remedies I ever believed were the proper ones to be used in diseases of a bilious origin. I shall take pleasure in recommending them, not only to my patients but the entire medical profession. Yours truly, J. M. WISTAR, M.D. From one of the leading retail druggists of West Virginia: WESTON, W. VA., June 18, 1880.—Messrs. Canby, Gilpin & Co.—Gents: Please send by express twelve dozen Gilpin's Vegetable Liver Pills. I have the most flattering accounts from all who have used them, and believe the day is not far distant when they will supersede all others. Yours, F. M. CHALFANT. We could fill several pages with certificates, etc., from prominent men throughout the country, but prefer to let the Pills in the future, as they have in the past, rest entirely on their own merit, knowing that wherever they are known their use will pass down from generation to generation. GILPIN'S VEGETABLE LIVER PILLS are sold by all respectable druggists and country store-keepers throughout the United States and Canada.

Principal Depot, CANBY, GILPIN & CO., Baltimore.

JERSEY BULL

Island Valeur, 5514.

THIS handsome young bull will be permitted to serve a limited number of approved cows at \$25 each. Cost of keep of cows \$2 per week at owners' risk.

Island Valeur is a grandson of Ona, probably the best of the granddaughters of Coomassie, having made 17 pounds 4 ounces of butter in 7 days when 8 years old. Two granddaughters of Coomassie recently sold in New York at auction for \$4,800 and \$3,750, while a great-granddaughter brought \$5,500, the highest price ever paid for Jersey cows. The \$4,800 cow was a half sister of Ona, while the \$3,550 cow was a daughter of a brother of Ona. The Coomassie blood is the most popular in this country, as shown by the fact eight animals of this family sold at auction for an average of \$3,620, while 4 averaged \$3,656, 8,000, being the highest price ever paid for Jersey cows. WATTS & SETH, Paul Street, Baltimore, Md.

FINE PHOTOGRAPHIC PORTRAITS

By the Great Instantaneous Process. SECURING NATURAL EXPRESSIONS and PERFECT LIKENESSES. Our finest Imperial Portraits \$3.00 per dozen (formerly \$5.00). CHILDREN'S PORTRAITS A SPECIALTY. We have excellent facilities for copying old pictures Daguerreotypes, etc. First-class Photography at moderate prices, at The Imperial Art Studio, 205 W. Baltimore St., RICHARD WALZEL, Proprietor.

Revolution in Sheet Music.

FIVE CENTS A COPY. OVER THE GARDEN WALL, and all the latest and most popular Sheet Music of the day, now retelling at 30 to 75 cents per copy, for sale at all news dealers and stationers. Having just opened our branch house here, we are prepared to supply dealers and agents at liberal terms. Send for our circular. W. A. EVANS & BRO. Room 1 Central Building, N. W. Cor. Holliday and Baltimore Sts., Baltimore

GEORGE PAGE & CO.



No. 5 NORTH SCHROEDER STREET, BALTIMORE, MD.
MANUFACTURERS OF **PATENT PORTABLE STEAM ENGINES.**

The Boilers the Safest and most Economical of Fuel made.

STATIONARY Steam Engines and Boilers, Patent Portable Circular Saw Mills, Sash, Mule and Gang Saw Mills, Flour Mill Machinery, Grist Mills, Shafting, Pulleys, &c., &c. **AGRICULTURAL ENGINES A SPECIALTY.** Lath, Shingle and Barrel Machinery, Lefel Turbine Water Wheels, Wood Working Machinery, all kinds; Tanite Emery Wheels and Grinders, Circular Saws, Saw Gummers, and Tools and Mill Supplies generally. Agents for **NICOLS, SHEPARD & CO'S VIBRATOR THRESHING MACHINES.** COMPLETE THRESHING OUTFITS FURNISHED. Send for Descriptive Catalogue and Reduced Price List.

THE
PEOPLES' MUTUAL LIVE STOCK INSURANCE COMPANY
OF BALTIMORE, MD.

Office, No. 23 South Street.

Over the Firemen's Insurance Company.

THIS COMPANY INSURES

HORSES, MULES AND MILCH COWS

Against Death by Disease or Accident.

IT IS AN INSURANCE COMPANY, NOT AN ASSOCIATION.

Makes Yearly Reports to the Insurance Department of the State of Maryland.

PLAN MUTUAL.

ALL STOCK inspected by the Company's inspectors before policies are issued. For particulars send to the Company's office for circular, which gives all information as to plan, cost, etc. **President, ROBT. S. CORSE,** formerly of Clairmont Nurseries. **Vice President, WM. B. SANDS,** Editor AMERICAN FARMER. **Treasurer, GEO. W. S. HOFFMAN,** of W. H. Hoffman & Sons, Paper Manufacturers, Baltimore county. **Secretary, ELI W. FREE.**

BICKFORD AND HUFFMAN GRAIN DRILL.

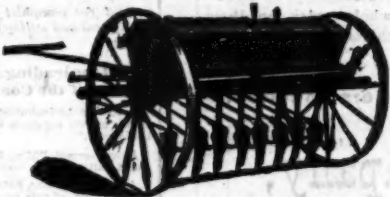
OUR FERTILIZER ATTACHMENTS ARE TIME AND TRIAL PROVEN.

And to-day there is not a single fertilizer attachment possessing any degree of popularity in the United States, that we have not proven and rejected or can supply on our drill.

THE OLD STANDARD
FAVORITE,

THE EMPIRE
OR MARKS,

FORCE FEED (so-called),
We keep in stock.



BUT THE
"New Departure"

is our Pride—steps far in
front of them all.
WITH

NICKEL PLATED, NON-CORROSIVE,

SECTIONAL METAL-BOTTOM DETACHABLE DISTRIBUTOR.

Readily adjusted to amounts, Easily kept clean, Simple, Durable, Always in order for business, Using Continuous Solid Steel Axles, Double Reversible Steel Points, Double Force-Feed Distributors, and a practical

FORCE-FEED GRASS SEEDER.

Perfectly Adjustable to Quantity, No Drizzling or Wasting of Seed, Positive in Distribution, Operating in front or rear at will. Each Drill furnished with Double Registering Surveyor, Davis' Tube Shifter, Whiffletrees and Neck-Yoke.

THE GRAIN, FERTILIZER & GRASS SEED DISTRIBUTORS,
EACH THE DESIDERATUM OF FORCE FEEDS.

Capable of Planting, with unparalleled continuity and exactness, each and every variety of **FIELD GRAINS**, with all the certainty of operation, and ready adjustment to quantity, its most favored competitor can show in the distribution of a single variety.

PLANTS FIELD CORN OR BEANS

In drills as perfectly as the special drills manufactured for this work.

LIGHT IN DRAFT, CONVENIENT IN ADJUSTMENT, RELIABLE IN OPERATION.

FULLY WARRANTED.

H. P. UNDERHILL, GEN'L AGENT, 64 S. Sharp St., Baltimore, Md.

GEORGE O. STEVENS,

WINDOW SASHES, BLINDS & DOORS
49
LIGHT STREET.

BALTIMORE.

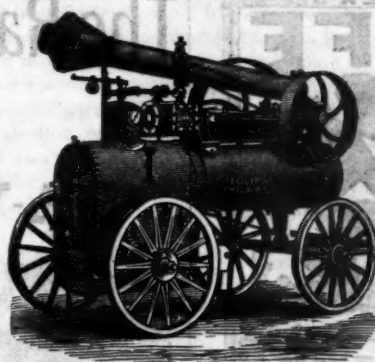
KEEPS IN STOCK AND FURNISHES TO ORDER: Window Sashes, Doors, Blinds, Mouldings, Brackets, Hand Railings, Balusters, Newel Posts, Bracket Shelves, Barge Boards, Window Caps, Door Caps, Pews and Church Work, Blinds, Hinges, Builders' Hardware, Wood Mantels, Window Frames, Door Frames, Paints, Oil, Putty, Glass, Lumber, Bricks, Lime, Sash Weights, Sash Cord, Porch Columns, Tree Boxes. **The Best Work at Lowest Prices.**

JOSHUA THOMAS,
STEAM.

Agricultural and Mill Machinery

ECLIPSE
AGRICULTURAL ENGINE

FIRST PREMIUM WHEREVER
EXHIBITED.



Best, Cheapest,
and most
Economical En-
gine in the
Market.

Buffalo Pitts Thresher and Cleaner,

The old standard, and still ahead of all competitors.

**KIRBY AND WHEELER MOWERS AND REAPERS,
OSBORNE SELF-BINDING HARVESTER.**

**A Full Line of Harvesting Machines, adapted to the
wants and taste of Farmers any and everywhere.**

**Union and Hagerstown Grain and Fertilizer Drills, Circular Saw Mills,
Chieftain Horse Rakes, Portable Grist Mills,
Millstones, Smut Machines, Bolting Cloths, Buckeye Force Pump,
Mill Picks, Leather and Gum Belting, Cucumber-Wood Pumps,
The Watt and Ball Plows, &c., &c.**

Prices and Descriptive Circulars on application, and correspondence solicited from all wanting anything in my line.

OFFICE AND WAREHOUSE,

No. 53 Light St., Baltimore, Md.

S. HAMILTON CAUGHTY.

NOAH W. CAUGHTY.

NOAH WALKER & CO.

CLOTHING and FURNISHING GOODS

165 and 167 W. Baltimore St.,

Between Calvert and Light Sts., SOUTH SIDE,

Washington Building.

Baltimore, Md.

ORDER DEPARTMENT.—Gentlemen's Clothing and Shirts, of any material and style, made to order with prompt and careful attention, and strict reference to the established reputation of the house for **TASTEFUL AND SUBSTANTIAL CLOTHING.** Prices guaranteed to be lower than merchant tailoring establishments generally. Their stock of **BOYS' CLOTHING**, from three years old up, is unsurpassed. Samples of material, with directions by which any one can measure, and prices, sent by mail when desired.

GEO. F. SLOAN & BROTHER,
LUMBER,

DOORS, SASH, BRICKS, &C.

IN LOTS TO SUIT.

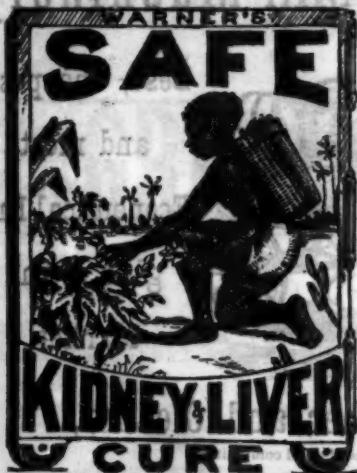
**132 LIGHT STREET WHARF,
BALTIMORE.**

"High Grade" Ammoniated Super-Phosphate.
"Bos" Ammoniated Super-Phosphate,
"GRAIN GENERATOR."

DISSOLVED S. G. PHOSPHATE,
 12 to 15 Per Cent. Available Phosphoric Acid.
DISSOLVED ANIMAL BONE.
AGRICULTURAL CHEMICALS.

We have in stock a full line of the above goods.

WM. DAVISON & CO. 118 W. LOMBARD STREET,
BALTIMORE.



Disease is an effect, not a cause. Its origin is within; its manifestations without. Hence, to cure the disease that cause must be removed, and in no other way can a cure ever be effected. **WARNER'S SAFE KIDNEY AND LIVER CURE** is established on just this principle. It realizes that

95 PER CENT.

of all diseases arise from deranged kidneys and liver, and it strikes at once at the root of the difficulty. The elements of which it is composed act directly upon these great organs, both as a food and restorer, and by placing them in a healthy condition, drive disease and pain from the system.

For the innumerable troubles caused by unhealthy Kidneys, Liver and Urinary Organs; for the distressing Disorders of Women; for Malaria, and for physical derangements generally, this great remedy has no equal. Beware of impostors, imitations and concoctions said to be just as good. For **DIABETES**, ask for **Warner's Safe Diabetes Cure**. For sale by all dealers.

L. H. WARNER & CO.,
 ROCHESTER, N. Y.

AGENTS! AGENTS! AGENTS!
GEN. DODGE'S new book, just published, entitled
THIRTY-THREE YEARS AMONG
OUR WILD INDIANS

is the greatest classic ever offered to you. Introduction by **GEN. SHERMAN**. This superbly illustrated, first-class and thrilling work contains all others 16 to 1, and is the finest picture book ever published. Agents average 16 to 20 orders a day. 75¢ in thousands in price. First-class AGENTS WANTED. Exclusive Territory and Extra Terms given. Send for circulars to **A. B. WORTHINGTON & CO.,** Hartford, Conn.

The Rasin Fertilizer Company,

PROPRIETORS OF THE

"SEA-WALL GUANO WORKS."



SITUATED ON THE PATAPSCO RIVER, AT SEAWALL, ANNE ARUNDEL CO.

The most extensive and permanent WORKS in the United States, and the whole under the direct supervision of Mr. E. W. L. RASIN, the General Manager of the Company, whose thorough knowledge and experience is a guarantee of the quality of their FERTILIZERS.

Large Stocks on hand and ready for delivery. Your orders Solicited.

The Rasin Fertilizer Company,
 20 & 22 South Street, Baltimore.

SLINGLUFF & CO.

OFFICE, 157 W. Fayette St. } **BALTIMORE.** { WORKS, Foot Leadenhall St.
 Manufacturers and Manipulators of

PHOSPHATES.

We are now offering to the trade the following **WELL-KNOWN BRANDS OF GOOD**, which we guarantee fully up to the standard:

SLINGLUFF'S DISSOLVED GROUND BONE,
 Containing 3 per cent. of Ammonia.

SLINGLUFF'S DISSOLVED SOUTH AMERICAN BONE ASH,
 Containing 40 to 44 per cent. Soluble Bone Phosphate.

SLINGLUFF'S DISSOLVED SOUTH CAROLINA PHOSPHATE,
 Containing 25 to 33 per cent. Soluble Bone Phosphate.

To meet the demand for a High-Grade Fertilizer, we are offering

SLINGLUFF'S NATIVE SUPER-PHOSPHATE,

Prepared entirely from Animal Bone, highly ammoniated. Also,

SLINGLUFF'S No. 1 AMMONIATED SUPER-PHOSPHATE.

This we can confidently recommend as one of the best fertilizers sold in the market at the price.

FERTILIZERS
BROWN
CHEMICAL CO
 BALTIMORE, MD.

POWELL'S PREPARED CHEMICALS
 AND
PURE FERTILIZERS!

Tip Top Bone Fertilizer. Bone Meal.
 Dissolved Bone. Potash. Ammonia.
 And ALL HIGH-GRADE FERTILIZING MATERIALS.

For \$12 a Farmer can buy a FORMULA (520 lbs.) of **POWELL'S PREPARED CHEMICALS!**

This, when mixed at home, makes **ONE TON** of SUPERIOR PHOSPHATE, equal in plant-life and as certain of successful crop-production as many high-priced Phosphates.

NO EXTRA EXPENSE. No trouble to mix. Full directions.

POWELL'S CHEMICALS have been thoroughly tried, give universal satisfaction, and we offer leading farmers in every state as reference.

Send for pamphlet giving full information of analytical and selling value of all fertilizing material.

What the leading Agricultural Journals of the Country say of us:

American Agriculturist, N.Y., Feb., 1892: "The above firm is of best repute in its own city and their guarantee is good."

Farm Journal, Phila., Feb., 1892: "Brown Chemical Co. of Baltimore is a very old and perfectly sound firm."

American Farmer, Baltimore, March, 1892: "Brown Chemical Co. of this city are doing a large business in their special Fertilizers, and present numerous and emphatic testimonials as to their results."

WM. STUART SYMINGTON.

OFFICE,
 7 German St.,
 Baltimore.

SYMINGTON BROS. & CO.

Manufacturers of the

ORIOLE FERTILIZERS,

VIZ.:

Oriole Fertilizer for Tobacco.

Oriole Oaky Wood Fertilizer

For Red Lands.

Oriole Piney Wood Fertilizer

For Grey Lands.

Oriole Acid Phosphate.

Oriole Dissolved Bones.

Oriole Amm. Bone Super Phos

Each brand is made under a different and distinct formula, and each contains what is most needed by the particular soil for which it is intended. We guarantee our goods exactly as represented.

SYMINGTON BROS. & CO., Manufacturing Chemists.

THOS. A. SYMINGTON.

WORKS,
 Locust Point,
 Baltimore.

R. J. BAKER.

SULPHATE OF AMMONIA.

ESTABLISHED 1837.

R. J. BAKER & CO.

MANUFACTURERS AND DEALERS IN

Pure Ground Bone, Chemicals, Acids, &c.,

For Manufacturing Super-Phosphates.

AMMONIATED SUPER-PHOSPHATE FOR ALL CROPS.

PURE DISSOLVED RAW BONE.

PURE FINE GROUND RAW BONE.

STAG SUPER-PHOSPHATE OF LIME FOR TOBACCO.

FACTORY AT LOCUST POINT.

Office, 36 & 38 S. Charles St., Baltimore Md.

ENTERED AT POSTOFFICE, BALTIMORE, AS SECOND-CLASS

